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ORIGINAL LECTURES.

SACCULATED PLEURAL EFFUSION PROBABLY ATTRIBUTABLE TO ACUTE MILIARY TUBERCULOSIS OR SARCOMA.

A Clinical Lecture delivered at the Philadelphia Hospital.

By EDWARD T. BRUEN, M.D.,

PHYSICIAN TO THE HOSPITAL AND ASSISTANT PROFESSOR OF PHYSICAL
DIAGNOSIS IN THE UNIVERSITY OF PENNSYLVANIA.

(Reported by Wm. H. Morrison, M.D.)

GENTLEMEN: This man, forty years of age, was admitted to the hospital about three weeks ago. At that time he was suffering from pleurisy with effusion. There was complete flatness on percussion over the axillary and posterior aspects of the chest, and in these situations there was complete absence of respiratory murmur and of vocal fremitus, while on the opposite side there was exaggerated respiratory murmur. Further examination during the progress of the case led to the belief that the effusion was sacculated. Percussion over the anterior portion of the left chest gave resonance from the clavicle to the base. Although this resonance was not perfect, yet it exhibited a marked contrast to the flatness heard over the lateral portion of the chest. Auscultation over the portion of the chest which gave resonance on percussion, revealed a feeble respiratory murmur and some râles.

Another important physical sign was that the tissues of the intercostal spaces were drawn in with each act of inspiration. This led to the suspicion that adhesions existed between the visceral and costal pleura. The explanation of the mechanism of this sign is as follows: Under normal conditions, when the act of inspiration is performed, the chest distends and the lung expands, applying itself closely to the inner surface of the chest. When a pleural effusion takes place, the chest is placed permanently in the position which it assumes in full inspiration. If, under such circumstances, the pleura covering the lung is attached to the pleura covering the ribs, and inspiration be attempted, the chest wall is carried a little beyond the position of full inspiration, and retraction of the interspaces takes place. This is an important evidence in the diagnosis of sacculated pleural effusion.

There are two other symptoms which were very prominently shown by this patient. One of these is marked shortness of breath. This is more pronounced in this patient than it is in many cases in which the side of the chest is entirely filled. I have shown you such cases on previous occasions, but in those we accounted for the absence of dyspnoea by the fact that the effusion had taken place gradually or had existed for a long time, and the unaffected side of the chest had been able to accommodate itself to the increased amount of work which it was called upon to perform. In this patient, I watched the gradual increase of the effusion, and from

the time that it began to form up to the present time the dyspnoea has been very marked.

Having made out the diagnosis so far, the patient was given a mixture containing ten grains of acetate of potassium, five grains of iodide of potassium, and half an ounce of infusion of juniper three times a day. Ten drops of tincture of digitalis were given four times a day to support the heart and to secure the diuretic effect of the digitalis. Blisters were also applied to the back of the chest. I did not give jaborandi or pilocarpine, which I have recommended so highly on previous occasions, because the pulse was always frequent, running about 120 per minute, and was feeble and rather dicrotic, and the patient was generally bathed in sweat. I was not deterred from the use of pilocarpine because the patient was bathed in sweat, for I regarded this as simply a transudation from the skin. Pilocarpine exerts a stimulative action on the skin, causing not only a secretion of watery matter, but also the excretion of solid material. The main reason for avoiding jaborandi or pilocarpine was the evident weakness of the heart, for this remedy exerts a decided depressing influence on the cardiac muscle. Where the action of the heart is already embarrassed, jaborandi may cause an arrest of its movements. I therefore carried out the treatment already mentioned and employed inunctions of oleate of mercury in the axillæ and groins.

Although this plan of treatment was thoroughly carried out, the dyspnoea continued so marked that after two weeks' treatment I considered that further measures were required for the relief of this symptom. I therefore performed paracentesis. As I have told you on other occasions, I should not tap the chest in cases of simple pleural effusion, except in the presence of one of two conditions. These are, such dyspnoea as endangers the safety of the patient and the persistence of effusion without any tendency to absorption of the fluid within a reasonable time, say six or seven weeks. In this case, the dyspnoea was so marked that I performed paracentesis earlier, selecting a point on the left side in the eighth interspace in the anterior axillary line. The needle entered an accumulation of fluid, and two quarts were removed. Moving the needle within the cavity, I felt it impinge on a band of membrane, and thrusting the needle backward, it entered another accumulation of fluid, and a pint of liquid was removed. The diagnosis of sacculated pleural effusion was thus established.

The dyspnoea was relieved to a slight extent by this procedure, but not as much as we had reason to expect, for resonance replaced the flatness on percussion over the axillary region, showing that the lung had expanded. I then searched for an explanation of this unusual state of affairs. The heart was the organ first examined. There was found a slight increase of the area of cardiac dulness. As you know, there are two areas of cardiac dulness; one of absolute dulness, the other of impaired resonance, which extends outside of

the area of absolute dulness, and indicates the portion of heart which is covered with lung tissue. In the present case, this area of impaired dulness merged into the area of positive dulness. Auscultation showed a marked enfeeblement of the heart-sounds, and the first sound especially sounded distant. These signs pointed to the presence of pericarditis. Pericarditis is always a secondary affection, and does not, like simple pleurisy, develop spontaneously. The physical signs taken in connection with the inflammation of the pleura, made me quite positive that there was pericarditis, probably secondary to the pleuritis. I have already stated that the increase in the area of cardiac dulness was not marked, but effusion may be present without any decided extension of the area of dulness, for the tendency of moderate effusions is to occupy the inferior and posterior portions of the sac, pushing the heart upwards and converting the area of impaired resonance into one of dulness on percussion.

Although pericarditis was found, yet this did not account for some of the important symptoms. It did not satisfactorily explain the dyspnoea. It did not account for the bronchitis which was present, and it is not usual to have pleural effusion accompanied with bronchitis. Again, there was a temperature record which, during the past three weeks, has continued between 100° and 102° . It has, therefore, been a very even temperature. A rise of temperature is, of course, expected with the development of pleurisy or pericarditis; but when effusion has taken place, the fever subsides. There was also a rapid pulse, which has always been near or above 120 per minute. Profuse sweating was another marked symptom.

If you have noted the symptoms which have been mentioned, you will find that they are compatible with a disease from which I strongly suspect that this patient is suffering, viz., miliary tuberculosis. This process develops in the lymphatic structures of the lung, and usually is a general process extending throughout the whole lung, affecting the lymph structures around the bronchial tubes, and around the arteries which supply the lung—that is, in the peribronchial sheath. This condition makes the lung more dense, and less capable of performing its function of aerating the blood.

Returning to our patient, let us see what evidence can be adduced in favor of this view. On questioning him closely, we find that the family history is somewhat conflicting. The father and mother are still living, at the age of sixty years. There are two brothers who are perfectly well, but one brother died from pulmonary trouble of some kind at the age of eighteen. We also ascertained that the patient first began to have some trouble with the chest about six weeks before he came to the hospital, that the shortness of breath was a marked feature at that time, and continued to increase until he came under observation. In connection with this, we recall the existence of the bronchitis which was present on admission; for the first time I examined his chest, I heard these fine, moist crackling râles which are still present. These fine, moist râles are very significant. There was also exaggerated respiratory murmur, but no evidences of consolidation. These râles could, therefore, only be due to exudation, the result of inflammation, or of exudation of an oedematous character. If there had been bronchitis, it would doubtless have been

improved in the course of three weeks; or if there had been oedema from pressure, some modification in the physical signs would have taken place in the course of three weeks. Effusion, the result of the deposit of miliary tubercles, would, probably, be unaffected by treatment. There is, therefore, strong reason for suspecting that the patient is suffering from the deposit of tubercles in the finer structures of the lung. This theory would explain a number of the symptoms. It would explain the presence of the râles. It would explain the temperature record, for an even temperature is reasonably characteristic of tubercular disease. Occasionally there is high temperature associated with tubercular affections; but this is, as a rule, present only in those cases of miliary tuberculosis associated with some suppurative process in the lungs or pleura. But where miliary tuberculosis develops primarily without the presence of suppurative disease, the temperature, as a rule, is found to be between 100° and 102° .

The dyspnoea would also be explained, for not only is one side of the lung incapacitated by the presence of the pleural effusion, but the other lung is infiltrated with the nodular tubercular matter.

I lay some stress on the pulse in making the diagnosis. In pleurisy, there is usually the ordinary pulse of inflammation, which, while it may be rapid, is not a dicrotic, gaseous, compressible pulse. A gaseous pulse, yielding readily under the finger, is compatible only with some serious blood disease. It is the pulse which is found in fevers. Miliary tuberculosis is really a specific inflammation different from the ordinary simple, frank inflammation which occurs in the pleura or pericardium. I regard the persistent, rapid, gaseous pulse, in connection with the other symptoms, as strongly supporting the theory of tubercular trouble.

Then in regard to the sweating. His head is beaded with sweat at this moment, and his bed is continually soaked. Profuse sweating of this character is not found in frank, simple inflammation of the pleura. This cannot be explained by weakness, for the patient is not particularly debilitated. The temperature has exhibited no malarial characteristics, and the sweating has not occurred in paroxysms. I am confident that constant, profuse sweating is one of the most important symptoms of miliary tuberculosis when taken in connection with the other symptoms. The sero-fibrinous character of the pleurisy, reverses the rule which assigns a fibrinous character to pleural inflammation due to tuberculosis; yet this exception is not of cardinal importance.

The patient thinks that he has lost within the last six months at least forty pounds. This is another symptom of importance; because in case the diagnosis of tuberculosis falls, a reserve diagnosis may be substituted of malignant disease of the mediastinum, sarcomatous in character, with secondary simple inflammatory disease of the left pleural sac. Sarcoma occurs in the young and middle-aged. It is frequently attended with pleural effusion, which, although possible as the result of pressure, is at the same time often of inflammatory origin. The later process is developed either by the pressure or by the extension of irritation to the pleural lymphatics from those of the bronchial glands.

The case is a complicated one; and, while I incline to the diagnosis of miliary tuberculosis, I am also decided not to lose sight of my reserve hypothesis.

ORIGINAL ARTICLES.

A CASE OF
GUNSHOT WOUND OF THE INTESTINES
TREATED SUCCESSFULLY BY LAPAROTOMY,
WITH SUTURE OF THE INTESTINES.¹

BY WILLIAM T. BULL, M.D.,
SURGEON TO THE NEW YORK HOSPITAL.

THE propriety of exploring the abdomen for gunshot wounds has been amply discussed by many surgeons, both here and abroad. The majority still oppose it, notwithstanding that the very favorable results of abdominal operations for pathological lesions are generally acknowledged. Otis, Sims, Gross, Dugas, McGuire, Kinloch, and Parkes, in this country; Legouest, in France; and Nussbaum, in Germany, have urgently advocated operative interference. But they have been compelled to frame their conclusions from theoretical considerations and statistical data, and have been unable to support their views by the record of a single successful case. In fact, up to the last twelvemonth, I find but two cases recorded in which thorough abdominal exploration was resorted to by laparotomy. Kinloch, in 1882, opened the belly and sutured five pistol-shot wounds in mesentery and intestine. Two other wounds escaped observation. The patient died in thirty hours. And Mr. Lloyd, of the Queen's Hospital, Birmingham, performed abdominal section for suppurative peritonitis three days after a pistol-ball had perforated the small intestine in two places. The intestine was sewed into the abdominal wound and the cavity drained. Death followed in two hours.² Last summer, however, Kocher, of Berne, sutured a pistol-shot wound of the anterior wall of the stomach through an incision in the median line, and the patient recovered. The case is briefly reported in the *American Journal of the Medical Sciences*, Oct. 1884:

"A boy, aged 14, was admitted into the hospital half an hour after having received a wound in the region of the stomach from a pistol-shot, aimed at him from a distance of five paces. He was pale, and complained of abdominal pain; the abdomen was swollen and distinctly dull on percussion inferiorly. Pressure on abdomen caused pain. A quarter of an hour later, hiccup, severe epigastric pain, vomiting, pallor, and symptoms of collapse came on. There was tympanitic resonance from the ensiform cartilage to the umbilicus, with complete dulness from the navel downward and in the flanks. The lightest percussion caused severe pain. Three hours after the injury, laparotomy was performed. On opening the abdominal cavity, in the region of the navel, a great quantity of dark blood escaped. The bullet wound was discovered with comparative ease; it was situated on the anterior surface of the stomach toward the greater curvature, in the direction of the fundus. The wound was circular, with sharp edges, and about half an inch in diameter. The bullet could not be found, nor was there any aperture of exit. The edges of the wound were united first with two catgut ligatures, like an ordinary wound, and then a continuous silk suture was applied for the distance of about an

inch, so as to invert the serous coat around the wound. Recovery was retarded by an abscess which formed in the track of the sutures in the abdominal wound."

As a further contribution to this subject, I wish to present the following history: and with it I have the pleasure of showing you the patient. It is now three months, lacking a few days, from the time since the operation was performed, and he has quite recovered his usual health.

CASE.—Wm. McE., a truck-driver, 22 years of age, was brought to the Chambers Street Hospital at 10 P.M., November 2, 1884, by ambulance from the Police Station of the 10th Precinct. A half hour previously he had been accidentally shot with a pistol of thirty-two calibre, the ball entering the abdominal wall near the navel. On admission he was found to be perfectly conscious, warm, with a pulse at 96, of good volume; temperature 97.8°; respiration 18. He had vomited solid food before admission. He retched frequently, and complained of great pain all over the abdomen, and had tenesmus. The abdomen was tender, but not swollen, nor tympanitic. The wound of entrance was situated one and a half inches below the navel, and one and a half inches to the left of the median line. It was half an inch in diameter, with blackened edges. The bullet could not be detected anywhere beneath the skin. The wound was not probed. A dressing of iodoform gauze and borated cotton was applied after thoroughly washing the skin with a two and a half per cent. solution of carbolic acid. One-sixth of a grain of morphia was given hypodermically.

Twelve hours later (November 3, 10.30 P.M.), when seen by myself, his condition was as follows: pulse 102; respiration 30; temperature 100.2°. Has severe abdominal pain, although he has received twenty-one minims of Magendie's solution (in four injections) since admission. He has slept for about a half hour after each injection. Has vomited a little watery fluid with particles of food. His urine has been drawn and contained no blood. Nothing has been passed per rectum. The abdomen is normal in appearance (save for the wound) and to the touch, but slightly tender all over. Rectum normal. He has received nothing by the mouth but ice, except (by mistake) a cup of milk, which was shortly afterwards thrown up. A cold water coil has been put on the belly, and the dressing made lighter. A probe could not be made to enter the cavity with gentle manipulation.

Seven hours later, seventeen hours after the accident (Nov. 3, 5.30 P.M.), his condition was practically unchanged. He had passed urine voluntarily. The operation was performed with the assistance of Drs. F. W. Murray and C. A. Jersey, and Drs. Mack, Morton, Kirby, and Ten Eyck, of the house staff, Dr. B. Farquhar Curtis, Dr. C. A. Powers, Dr. A. B. Jessup, Jr., and several others, witnessed it. The following antiseptic precautions were observed:

Two large atomizers sprayed the operating-room, for two hours before the operation, with a 5 per cent. solution of carbolic acid. The room itself (which was 25 by 35 or 40) was heated to 80° F., and all the solutions used were warm. For the instruments and hands, 5 per cent. solution of carbolic

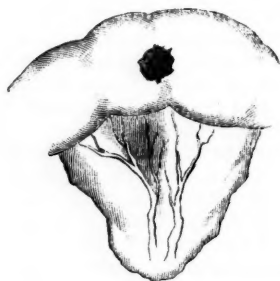
¹ Read before the New York Surgical Society, Jan. 27, 1885.

² British Med. Journal, March 24, 1883.

acid was employed. The sponges were fresh from carbolic acid, after having been purified with permanganate of potash, and bleached with oxalic acid (Keller's process). The towels, which were not new, were soaked in 5 per cent. solution of carbolic acid for an hour. The catgut was Kocher's; the large silk for the abdominal wound had been boiled in carbolic acid, but the finer (the "No. 1" iron-dyed silk of Snowden), which was used for the wounds of the gut, was not put in carbolic acid till the operation was begun. During the operation, warm water was used for the towels and for washing the sponges, but the final sponging of the cavity was done with $2\frac{1}{2}$ per cent. carbolic acid solution.

A vertical incision two inches long into the bullet wound showed that it was directed in a zig-zag course through the parietes and actually perforated the peritoneum. The usual incision was then made in the middle line from the umbilicus to just above the pubes. On opening the peritoneum, bloody serum without any fecal masses but containing small clots, flowed out freely (at least two pints), floating the coils of intestine into the wound. On the border of the first portion of gut presenting was a slight incised wound of the serous coat only, which was doubtless made by the scissors. It was tied with catgut over an artery clamp. Several coils of intestine, representing three or four feet in length, were then pulled out of the wound and carefully examined. The intestine and mesentery were coated here and there with clots and flakes of fibrin, and these were so adherent that, to dislodge them and see the surface clearly, it was necessary to rub the peritoneum firmly with the sponge two or three times, and this both on its upper and lower surface. The gut was slightly congested and its coils were not adherent. The guts were placed under layers of towels and occasionally drenched with warm water. The first wound, shown diagrammatically in Fig. 1, encountered was about half an inch in diameter, situated midway between the attached and free border of the intestine, and several feet from the cæcum (Fig. 1). The

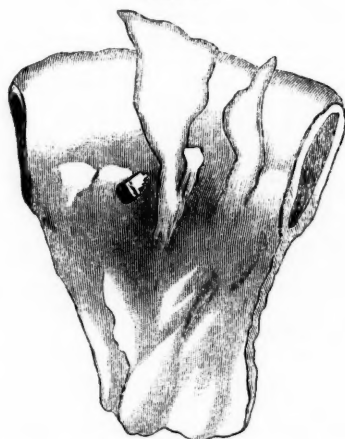
FIG. 1.



serous coat was clean cut, the mucous membrane lacerated and everted. It bled easily when its edges were separated, but not till then did yellow feces, of the consistency of gruel, escape. (The same was true of all the wounds. The everted mucous membrane acted as a plug.) The abdominal wound was then plugged with large sponges to shut off the cavity,

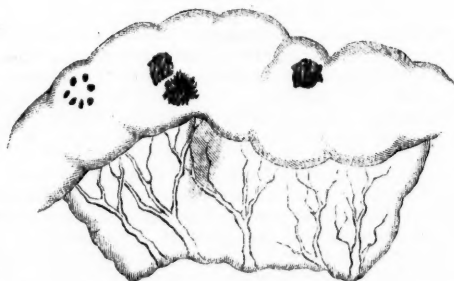
leaving only space enough for the protrusion of a loop of six inches which contained the wound. This was spread out on a towel and emptied of fecal matter through the bullet wound, and held by both hands of an assistant. The mucous membrane was inverted by making traction with two hooks, so as to convert the round hole into a longitudinal slit, parallel with the transverse diameter of the gut. The peritoneal edges were then approximated by five sutures inserted according to Lembert's method. Iodoform was rubbed along the line of suture. (This plan was followed in all the other wounds.) After removing several more loops the cavity of the pelvis was empty and the cæcum, the sigmoid flexure, and rectum and bladder were inspected after sponging out considerable bloody fluid with clots. The bullet was detected at once, lodged in the upper surface of the sigmoid flexure close to its mesenteric border (Fig. 2). It was just beneath the peritoneum, but

FIG. 2.



on removing it the wound was found to enter the lumen of the bowel, which was quite empty. Three sutures closed the wound. The open pelvis was then protected with sponges and more intestine drawn out from under the left edge of the abdominal wound.

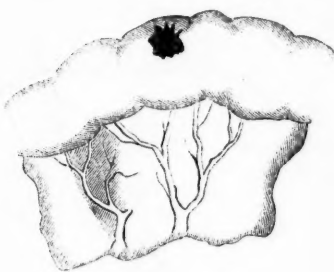
FIG. 3.



A third perforation was encountered similar to the first in size, but situated on the upper surface of the gut near its free border, a fourth and fifth close together and separated only by a bridge of the serous

coat, nearly opposite the preceding one, but an inch higher up (Fig. 3), and a sixth one about three inches further on (Fig. 4). These four wounds were all

FIG. 4.



within a length of four inches of the intestine. The two which were so close together had ragged and everted edges, from which the serous coat was stripped off for a distance of one-eighth of an inch. The bowels contained feces and were treated as before described. But the fourth and fifth wounds were converted into one oval slit by trimming off the ragged edges, and twelve sutures were required to close this, while five each were put into the other two wounds. The oval wound made by trimming the two adjacent ones embraced about one-third the calibre of the bowel, and its axis when sewed up was oblique in direction. The others were parallel with the transverse axis.

A few loops of intestine still remained in the cavity. In removing them the seventh perforation was found, several inches beyond the sixth. It was closed with five sutures. The small intestine, except the duodenum, was now all out. A sponge on a holder was passed into the epigastric and both lumbar regions. No blood or foreign matter was detected. The great omentum was not seen.

The pelvis was again sponged out, this time with a 2½ per cent. solution of carbolic acid, the intestines replaced, the lines of suture being inspected as they were encountered. The wound in the middle line was closed with heavy silk sutures, passing through the entire thickness of its walls, and superficial catgut sutures. The incision in the bullet-wound was sewed up in the same way, a drainage-tube being left at its lower end. Iodoform and borated cotton dressing.

The operation lasted two hours. The ether was not well borne. Shortly after commencing, the pulse was 112, the resp. 38; at the end of the first hour, pulse 132, resp. 44; at the end of an hour and a half, pulse 140, resp. 52. At this time the breathing stopped for a moment, and artificial respiration was resorted to, and the legs elevated for the remainder of the operation. At its close, pulse 134, resp. 39. Whiskey 3j and tr. digitalis were several times injected subcutaneously, and on being placed in bed, a hot-air bath was given and continued two hours. His strength improved rapidly. Six hours later a cold water coil was applied.

Nov. 4.—9 A.M. (fourteen hours after operation),

pulse 120; resp. 27; temp. 99½°. He has had cracked ice by mouth, two enemata of Valentine's beef-juice and whiskey, four hypodermic injections of whiskey and digitalis, and seven minims of Magendie's solution in two injections. Has passed three ounces of urine (sp. gr. 1024, acid, no albumen, many hyaline, few granular casts). Complains of slight pain and constant thirst, and has slept little. Has had occasional hiccough, and twice vomited dark green odorless fluid.

9 P.M., pulse 108; resp. 20; temp. 99½°. Has had ice, Vichy water in teaspoonful doses, two nutritive enemata, and fifteen minims of Magendie's solution in three injections. Vomited the same green matter four times, and had pain afterward, but at no other time. Has slept several hours. A few teaspoonfuls of beef peptonoids, 3ss to water 3j, given by mouth, but discontinued. Pupils normal; tongue moist, but coated; abdomen tender, but not swollen.

5th.—9 A.M., pulse 92; resp. 26; temp. 99½°. Had by mouth Vichy and hot tea with milk, but no sugar (in teaspoonful doses); by rectum two enemata of Valentine's beef-juice and whiskey; hypodermically twelve minims of Magendie's solution. Has slept several hours, and on awaking is bright and cheerful, complaining only occasionally of pain. Urine, thirty ounces. 6 P.M., pulse 92; resp. 20; temp. 101°. Has had two enemata of beef peptonoids and whiskey. All thus far have been retained. Fifteen minims of Magendie's solution in two injections. Vomited twice a brownish fluid. More abdominal pain and slight swelling and tenderness. Wounds normal. Ice-water coil continued. Rectal tube introduced to relieve tympanites. Urine, nineteen ounces.

6th.—9 A.M., pulse 80; resp. 17; temp. 100½°. Has had beef-tea, Vichy, and hot tea by mouth, two enemata, and fifteen minims of Magendie's solution in two injections. Vomited twice, and had desire to evacuate bowels. Still has pain. Abdomen tender, slightly distended. 6 P.M., pulse 84; resp. 18; temp. 101°. Drainage-tube removed.

7th.—9 A.M., pulse 84; resp. 17; temp. 100°. In the last twenty-four hours he has vomited three times a small quantity of brownish fluid. Alimentation as before, with the addition of small dose of dry champagne. Fifteen minims of Magendie's solution. He has slept much, but is restless when awake, and has little pain, but desires to have a passage. Tongue moist. Abdomen less distended. 6 P.M., pulse 87; resp. 17; temp. 102°. Fifteen minims Magendie. Vomited twice; irritable. After an enema of soap and water, a free watery, ill-smelling movement, containing small fecal masses.

8th.—9 A.M., pulse 84; resp. 17; temp. 101½°. 6 P.M., pulse 84; resp. 24; temp. 102°. Thirty minims Magendie. Nourishment as before. But two enemata. There have been three evacuations similar to the first one: fluid, but not watery; fetid, and containing little flakes and masses of fecal matter. Vomited three times. Suppuration about two of the sutures in the abdominal wound.

9th.—9 A.M., pulse 82; resp. 18; temp. 101°. 6 P.M., pulse 76; resp. 18; temp. 101°. One thin movement. Vomited brandy and soda, and also

bismuth and opium powders, but has retained plenty of peptonized milk, champagne, and beef-tea. Less pain. The wound about the sutures was swollen; and on taking out several of them, there is found a collection of pus external to the peritoneum. It communicates with the suppuration about the track of the sutures. The pus was not decomposed. All sutures are taken out but two or three upper ones. Wound stuffed with carbolyzed compresses. Cold water coil is withdrawn. The bullet wound is likewise split open through a part of its extent.

10th.—9 A.M., pulse 84; resp. 20; temp. $99\frac{1}{2}^{\circ}$. 6 P.M., pulse 84; resp. 18; temp. 100° . Two dark-colored passages of pasty consistence. Vomited once or twice very small quantities of contents of stomach. Occasional pain. Abdomen not swollen. The wound gapes widely, but is granulating except at one or two points. Urine similar in character to that passed before. It averages forty ounces per day. Tongue natural. Six minims of Magendie in twenty-four hours.

11th.—9 A.M., pulse 82; resp. 20; temp. 99° . 6 P.M., pulse 80; resp. 22; temp. 101° .

12th.—9 A.M., pulse 80; resp. 24; temp. $98\frac{1}{2}^{\circ}$. 6 P.M., pulse 86; resp. 20; temp. 100° . There have been three movements like the last mentioned in the last forty-eight hours. No vomiting nor decided pain. He complains only of being hungry, and of the discomfort of lying on the back. Abdomen normal but for the wounds, which are granulating.

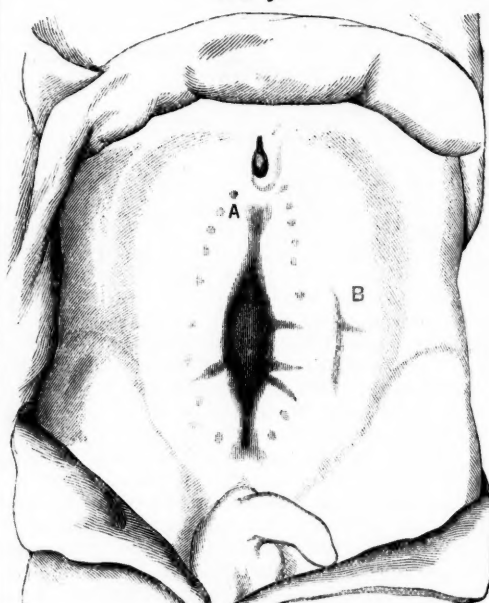
From this time the patient's convalescence was uninterrupted. The passages became less frequent and more solid; and from the fifteenth day, they were about natural. He vomited on the eleventh, and twice on the twelfth day, but never afterward. His appetite was excellent; and on Thanksgiving day, twenty-four days after the operation, he ate the sumptuous repast provided, including plum-pudding. Several sinuses which formed in the granulating wound required slitting up, and a large number of skin grafts was applied on two occasions.

After the carbolic acid, bals. Peru., and, later, iodoform dressings were employed. At the end of eight weeks, the large wound was cicatrized. He was discharged Dec. 31. The cicatrix was firm, but it is growing softer, and he is wearing a strong abdominal supporter. The functions of the alimentary canal are performed normally, and he feels—and apparently is—in good health. The urine, however, presents the same morbid products that it did during his treatment.

I am not prepared at the present moment to do more than submit for your consideration the facts contained in this history. To discuss further details, such as the indications for operation, the technique, and the antiseptics and the proper management of all varieties of visceral wounds, would be beyond my present purpose. I hope to have an opportunity for that at a later date, when I shall report a case of wound of the liver, with great hemorrhage, in which the patient died before the operation was completed. But I desire now to call attention to the fact that operative interference for gunshot wounds of the abdomen has been put to a practical test, and that it has

been successful. And I hope that other members of this Society may share my conviction, that this plan

FIG. 5.



Showing cicatrix of abdominal section (A) and that of the bullet wound (B), three months after operation.

of active treatment is now justified by this success, and that it should be adopted (within proper limits) to the exclusion of the "let alone" policy.

A NOTE ON THE ABSORPTION OF SALICYLIC ACID.

BY N. A. RANDOLPH, M.D.,

AND

SAMUEL G. DIXON,

OF THE UNIVERSITY OF PENNSYLVANIA.

IN view of the fact that the internal administration of salicylic acid and its salts is not infrequently capable of producing or increasing gastric irritability, the advantages of inducing its cutaneous absorption are at once apparent. By the application to the uninjured skin of salicylic acid, rubbed up in a thin paste with olive oil, we have been able to demonstrate the presence of the drug in the urine in each of seven cases in which such application was made. In six of these cases, an existing rheumatic attack was relieved by the application. Of these, in one case only did the application give a negative result.

CASE I.—Man, æt. 30, of rheumatic habit, who had been suffering for three days from rheumatic pains and stiffness in the right thigh. The pain had grown daily worse, until motion of the limb became almost unbearable. He was ordered to remain in bed, and twenty grains of salicylic acid were rubbed into a paste with olive oil, and gently smeared in each axilla. Four hours thereafter, the patient felt some-

what better; and the urine examined at this time showed the presence of the drug upon the application of the ferric chloride test. At noon, on the following day, the patient reported himself as entirely well.

CASE II.—Female, æt. 60, suffering from frequently recurrent and severe rheumatic pains in the shoulder. The method of treatment used in the preceding case was here employed, and the patient reported marked relief on the following day, at which time, also, the drug was found in her urine.

CASE III.—Female, æt. 28. Rheumatic pains in arm and shoulder. Application as in previous cases. The drug here proved a decided irritant to the very sensitive skin, and was removed in some fifteen hours. Results negative. Urine not examined. Pain and stiffness subsequently disappeared after the exhibition of large doses of sodium salicylate internally.

CASE IV.—Male, æt. 25, frequently subject to rheumatism in the left shoulder, and always relieved by the internal use of sodium salicylate; was relieved during a similar attack by the method already described.

CASE V.—Male, æt. 34, suffering with severe rheumatic pains in left shoulder.

Thirty grains of salicylic acid were rubbed up in olive oil, gently smeared upon the left side of the abdomen, and covered with rubber cloth. Here, as in the other cases, the urine was tested for the drug in question at the time that the application was made, with negative results. Urine passed in one hour and ten minutes thereafter gave, upon the application of the ferric chloride test, the response characteristic of the presence of salicylic acid; and this reaction was observed in several samples of urine from this patient up to the thirty-sixth hour after the application was made. In twelve hours, the rheumatic symptoms were greatly relieved, and they entirely disappeared within twenty-four hours.

CASE VI.¹—Dr. F., æt. 29. Rheumatic swelling of right knee, the circumference of which was one-third greater than that of its fellow. Patient gave history of previous persistent rheumatic attacks. Salicylic acid and oil (3ij to fʒj) were spread upon absorbent cotton, and the whole gently wrapped around the knee, which was here too acutely sensitive to permit of any friction. No internal medication was used. In twenty-four hours there was marked reduction both of pain and swelling, and within three days the patient had entirely recovered. During the treatment, swelling commenced in the knee of the opposite side, but disappeared under the same local treatment pursued with the joint first affected. The urine was several times examined during the treatment, and salicylic acid found therein.

This case is of especial interest as indicating that, superadded to the constitutional impress of the drug, there was a specific local effect at the place of its application.

We do not consider that the results of the six experiments here cited would warrant us in an unquali-

fied commendation of this method of exhibiting salicylic acid, but we feel fully justified in suggesting that a fair trial be given it by the medical profession.

BIOLOGICAL LABORATORY OF THE UNIVERSITY OF PENNSYLVANIA,
February 7, 1885.

THE SPINAL ARTHROPATHIES.

A CLINICAL REPORT OF SIX CASES OF CHARCOT'S JOINTS.¹

BY A. SYDNEY ROBERTS, M.D.,

SURGEON TO THE PHILADELPHIA HOSPITAL; INSTRUCTOR IN ORTHOPÆDIC SURGERY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA.

CASE I.—M. K., male, æt. 41, referred to the New York Orthopædic Dispensary from St. Luke's Hospital on May 5, 1879. Hereditary history unusually good. He is a moderate drinker. Health excellent until manifestation of present joint trouble. Married, and the father of five healthy children.

Condition on date of entry: A large nodular* tumor was found over the left hip-joint, oval in

FIG. 1.



shape, the long axis of which corresponds with line of Poupart's ligament (Fig. 1). Transverse diameter of normal limb over hip-joint, 22 inches; of affected limb at same point, 30¼ inches. No muscular atrophy detected by measurements of circumference. Left limb 1¾ inches shorter than its fellow; meas-

¹ We are indebted for the report of this case to the courtesy of Dr. William Gray, who pursued the method indicated at our suggestion.

¹ Read, by invitation, at a meeting of the Neurological Society of Philadelphia, January 26, 1885.

urements made from the umbilicus. External iliac fossa of left side filled with osteophytes, which add to bulk of tumor. The ligamentous structures about the joint seem entirely destroyed; motion of limb abnormally free in all directions. Head of femur probably absorbed or greatly atrophied. Limb abducted and rotated outward. What appears as the head of the femur is anterior to its normal position, lying under a "shed" of bone, built out from the pelvis, which covers its atrophied extremity like an umbrella. When the patient flexes the limb, the upper extremity of the femur glides forward until it catches under this shed of provisional bone, which, acting as a fulcrum, allows the patient to flex and rotate the limb with ease.

A thorough examination of the patient for evidence of a central lesion, revealed the absence of numbness of limbs, of pain, or of constricting bands; sensation slightly impaired on left side. On right side, reflex action increased on titillation of soles; none on left. No tendon reflex in either limb. Sways with "closed eyes test."

Condition eighteen months later: The patient presented all the marked symptoms of locomotor ataxia. Two years from date, upon which the above notes were recorded (May 5, 1879), he is confined to bed, with complete loss of muscular coordination.

Remarks.—The case exhibits an arthropathy existing four and a half years prior to the development of active tabetic symptoms, and shows a tendency, from early stages, to the formation of osteophytes about the joint, with early atrophy of the upper epiphysis of the femur.

At no time during the progress of the lesion were there developed reflex neural symptoms that would point to joint inflammation.

The joint lesion (swelling and tumefaction) diminished as the active symptoms of ataxia advanced. Provisional callus was thrown out about the atrophied extremity of the femur as a substitute for the destroyed acetabulum.

CASE II.—O. P., male, æt. 44. Registered as an out-patient in the New York Orthopædic Dispensary on January 29, 1879. The following notes were recorded.

Hereditary History.—Parents living and healthy; one brother died of phthisis. Patient is married; has three children, two in excellent health; the third has an intrapelvic abscess. (Subsequently died of amyloid degeneration of the kidneys.) Patient has had to work very hard, with considerable mental anxiety; no other known cause for present disease.

The left knee and ankle (Fig. 2) are enlarged, the latter more so relatively than the knee. The patient states that seven years ago, while working, a heavy box fell upon him, injuring the ankle. The joint became swollen, and he was "laid up for two months." He recovered, and suffered no inconvenience for one year; the swelling again returned in the same ankle and involved the entire leg. At this time he was incapacitated from work for three months; he recovered, and has had no active joint symptoms since. Has never had an abscess about the joint.

The urgent symptoms at present examination are those of locomotor ataxia. He cannot walk without

staggering, and when attempting to do so in the dark, or with closed eyes, falls. Suffers from ataxic pains in the right leg and arm. Is uncertain in guiding his finger to the tip of his nose, with eyes closed, or in

FIG. 2.



putting his heel on a designated spot. Sensation impaired in right hand and arm; has difficulty in buttoning his coat with that hand. When standing, or walking in his bare feet, he feels as though he were on cushions; vision unimpaired (eye-ground not examined).

On February 4, 1879, Dr. Cloves Adams saw the patient in consultation, and thought him to be suffering from locomotor ataxia in the third stage, with osseous changes in left ankle and synovitis of both knees.

The patient returned to the Dispensary in September of the same year, with a marked elastic swelling of the right elbow-joint (Fig. 3).

A year later (November, 1880) he was referred to the clinic of Dr. E. C. Seguin. He again applied to the Orthopædic Dispensary on February 14, 1881. The ataxic symptoms had advanced; he walked with extreme difficulty. The condition of the joints remained about the same as when last examined, now four months ago.

During November (1881) the patient was critically examined by Dr. S. Weir Mitchell, and pronounced to be in the third stage of locomotor ataxia, with spinal arthropathies of the right elbow and left ankle-joints. It was noted that the circumference of the elbow tumor had materially diminished since the last measurements were recorded (decrease of two and a half inches).

Remarks.—The joint enlargements in this patient presented three characteristic peripheral ataxic conditions:

1st. At the knee-joint synovial irritation, indicated by the physical signs of a chronic synovitis although

at no time during its course was there evidence of inflammation.

2d. A characteristic doughy, nodular ataxic joint tumor of the elbow, largely composed of osteophytes and excessive synovial secretion.

FIG. 3.



3d. Hypertrophy of the lower epiphyses of the tibia and fibula, with but slight synovial irritation.

The peripheral manifestations at the knee and ankle accompanied the earlier symptoms of ataxia; the elbow tumor entered abruptly upon the second stage of the sclerosis. I am indebted to my friend Dr. Newton M. Shaffer, of New York, for the privilege of reporting the above notes.

CASE III.—J. H., male, æt. 45; was admitted to my wards in the Philadelphia Hospital on April 3, 1883. The following notes were recorded: A vigorous, well-nourished man, with little personal knowledge of his family or their history. Knew his parents lived to advanced age, but thought both of his brothers had died, and likewise two sisters. Acknowledged to being strongly addicted to the use of alcohol. He thought his present trouble arose from a "dissipated life and constitutional syphilis."

Two years ago, after a debauch, his attention was directed to painful swelling of his right great toe. This lasted a few days, and as the pain and swelling of the toe subsided, the right ankle-joint enlarged. This swelling slowly and painlessly increased, and three months from its onset, the same condition appeared in the left ankle-joint. Without especial discomfort to the patient, this joint enlarged. He continued drinking to excess, and was admitted to the hospital in a state of chronic alcoholism.

An examination two weeks after admission, when all traces of alcoholism had subsided, gave evidence by the following facts of a central lesion: He had suffered from constricting pains about the abdomen, and occasional darting pain in the region of the hips and thighs for the past year. He also experiences considerable difficulty in walking, especially at night. At present, he has a staggering gait. Absence of patellar reflex in both limbs: sways and falls with "closed eyes test," and has difficulty in finding tip of nose with forefinger when eyes are closed.

The metatarso-phalangeal articulation of the right great toe is ankylosed. Both ankle-joints are enlarged apparently by a diffuse hypertrophy of the epiphyses of tibia and fibula. This increase has almost doubled their normal circumference. The subcutaneous tissues are slightly oedematous. The capsules of ankle-joints are distended and elastic.

When first admitted, the tissues about the ankles and legs were swollen, presenting the appearance of diffuse cellulitis. This subsided in a few days from rest and local treatment.

My colleague, Dr. C. K. Mills, saw the patient with me in consultation, and confirmed the diagnosis I had made—of posterior spinal sclerosis, with accompanying arthropathies at ankle-joints.

Remarks.—The joint hypertrophy had preceded any active symptoms of ataxia. The character of the joint enlargement was that of bony hypertrophy, without a tendency to the formation of osteophytes or to nodular irregularity of contour. The possibility of rheumatism or malignant disease was considered and dismissed. A thorough physical examination failed to detect any of the characteristic reflex neural symptoms of an epiphyseal osteitis.

The history of the progress and course of the ankle-joint hypertrophy, together with the evidence of a central lesion and the negative physical signs of local joint inflammation, all confirmed the diagnosis of an arthropathy of spinal origin.

CASE IV.—Dr. A. A. Y., male, æt. 65, resident of Hammonton, N. J. Examined the patient with Dr. S. Weir Mitchell on January 16, 1885. For the substance of the following notes I am indebted to Dr. Woodnutt.

History of patient: Family history excellent. He had always been strong and healthy during youth and up to 1865, though a hard-working farmer. An army life, and three years of extreme exposure prior to the close of the war, found him suffering in 1865 from sharp, wandering pains in the upper and lower extremities; never noticed, however, in the articulations. Loss of power followed in the right leg. Three years later suppurative arthritis attacked the metatarso-phalangeal articulation of the right great toe, and last phalanx of left ring finger, sequestra coming away in each instance.

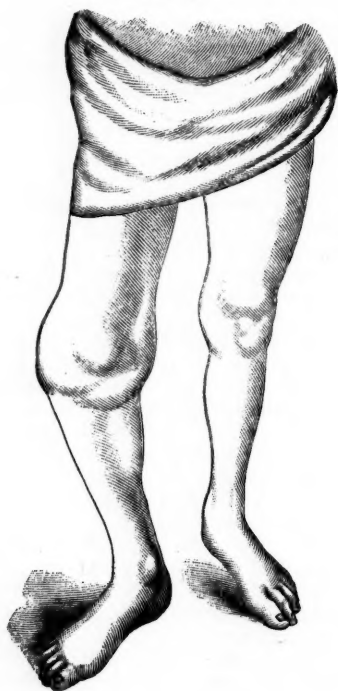
During 1870 the patient first noticed an oedematous swelling of the right elbow; following shortly upon this, the wrist-joint of the same arm gradually and painlessly enlarged. Then a distention of the capsule of the right knee-joint succeeded. The enlargement of the latter articulation was more rapid than either the wrist or elbow. Rheumatic pains in the joints accompanied the swelling and deformity.

The left limb has been comparatively exempt from pain. Recently, however, the capsule of the knee-joint has become distended and elastic. The elbow tumor has diminished somewhat in circumference during the past four years.

During the past year the distal phalanx of the right index finger has gradually atrophied, without inflammation, and is entirely wanting. The nail and finger end are normal, though somewhat shortened. Pain at present is chiefly in both feet, paroxysmal and erratic, often attacking corresponding points on the legs.

The present appearance of the right elbow and left knee-joint (Fig. 4) enlargements exhibit an irregular

FIG. 4.



nodulated hypertrophy, bearing no resemblance to normal joint outline, and consisting chiefly of osteophytes and abnormal increase of synovial fluid. Motion preternaturally free in all directions; structure of joints apparently entirely destroyed.

Remarks.—The joint lesions first appeared in this patient after ataxia had become established. The appearance of the affected elbow and knee is that of an enormous nodular hypertrophied mass of bone, doubling their normal circumference, associated with synovial distention of the capsule. Osteophytes readily movable within the capsule, and varying in size from a pigeon's egg to that of a turkey.

The atrophy of the distal phalanx of the right index finger is especially to be noted, it being the first instance of complete absorption of the diaphysis of bone that I have had an opportunity of observing.

CASE V.—W. H. McC., male, æt. 38, married. Admitted to the Orthopædic Dispensary of the University Hospital in July, 1883.

Hereditary history excellent; no evidence could be obtained of articular disease, rheumatism, or phthisis in any member of his family. He presented at date of examination the appearance of a healthy well-nourished man. Has always worked industriously at his trade of plumber. A moderate drinker. He had constitutional evidence of syphilis, following a chancre contracted in 1863.

The patient attributes the present enlargement of the right ankle-joint to an injury received while working in a cramped position. Following this strain, the ankle became suddenly discolored and swollen, bursting the buttons from his shoes. He was incapacitated for work during the succeeding four days; at the end of a week the discoloration and swelling had about disappeared. His attention was then first directed to a bony enlargement of the right ankle-joint. This slowly and painlessly increased in size without any appreciable interference in locomotion. At present examination the enlargement resembles a simple hypertrophy of the lower epiphyses of the tibia and fibula. The outline of the joint is globular, with slight elasticity of capsule. No pain or reflex muscular spasm.

Record of Spinal Symptoms.—Complains of darting pains about hips. Has difficulty in walking at night. Sways with closed eyes. Complete absence of patellar reflex on both sides. Dr. Horatio C. Wood saw him with me in October of 1883, and pronounced him ataxic.

Remarks.—This case presents an arthropathy that apparently followed a direct traumatism to the affected limb. From careful interrogation, I determined that the acute swelling, and ecchymosis resulted from rupture of a varicose vein, inasmuch as these were numerous, and greatly engorged about the affected ankle. This first attracted his attention to the ankle, the deeper bony growth being detected when the active symptoms of subcutaneous swelling had subsided.

The hypertrophy of the joint has increased the circumference four and a half inches over its fellow.

CASE VI.—A specimen of shoulder-joint arthropathy, lately removed at an autopsy held upon the body of a well-marked ataxic, has been referred to me by Dr. S. Weir Mitchell, to embody in this report. The joint had become suddenly and painlessly enlarged in the later stages of the central lesion. It presented ante-mortem all the characteristic symptoms of a tabetic arthropathy: distention of the capsule, abnormal mobility, and the presence of osteophytes. The joint, upon examination, presented the following:

1st. Cartilage covering head of humerus eroded; that upon glenoid cavity irregularly thickened.

2d. Anterior margin of glenoid cavity worn away, allowing the head of bone to rest in position of forward dislocation.

3d. Osteophytes abundant about junction of capsule with anatomical neck. Marked relaxation of ligamentous structures, and distention of capsule.

4th. General hypertrophy of epiphysis, somewhat nodular at margins. Evidences of hydrarthrosis.

The practical deductions to be drawn from a clinical study of the above somewhat anomalous cases, may be briefly summarized as follows:

Period of Development.—1st. The tabetic arthropathies may occur independently, or precede the active symptoms of locomotor ataxia.

2d. They occasionally develop suddenly, late in the course of a posterior spinal sclerosis.

Nature of Lesions.—The peripheral expression of central nerve irritation is characterized by the following changes found in the structure of the various articulations.

1st. A chronic asthenic hyperæmia of the synovial membranes; a hydrarthrosis.

2d. An interstitial atrophy of the epiphyses.

3d. A fungous or rarefying epiphyseal hypertrophy.

4th. The formation of osteophytes and bony stalactites.

These various joint expressions characteristic of the spinal arthropathies may exist separately; but are usually combined in the same subject.

Differential Diagnosis.—They may be readily distinguished from the common inflammatory lesions of the epiphyses by the total absence of the reflex neural phenomena—i.e., of pain, both reflex and local, the apprehensive state regarding joint movements, and the reflex or tetanic spasm of the muscles, always associated with joint arthritis. Abscess is never directly associated with the arthropathies, unless incident upon direct traumatism.

They are more difficult to differentiate from malignant disease of the articulations; but a careful inquiry into the history and course of the lesion, and the presence or absence of central disturbance, are our most reliable guides.

Course.—The progress of the arthropathies is essentially chronic. Occurring, not infrequently, early in the history of the tabetic lesion, they slowly increase, with occasional exacerbations, and years elapse before fully matured. A rapidly developing arthropathy may be associated with the later stages of an ataxia. Their course is self-limiting, though never reparative.

MEDICAL PROGRESS.

LACUNAR CARIES OF THE HANDLE OF THE MALLEUS.

—DR. S. MOOS, in the *Zeitschr. für Ohrenheilkunde*, Bd. xiv., describes caries of the tympanic bones as a condition frequently existing in suppurative inflammation of the middle ear. The malleus is the bone most frequently attacked, next in order the incus, and least frequently the stapes. The cause of the most frequent implication of the malleus is connected, according to the investigations of Dr. Moos, with the action of the tympanic bloodvessels and their relation to the handle of the malleus. The latter is chiefly nourished by the mucous membrane of the tympanic cavity, which covers also the inner surface of the tympanic membrane, while the outer cuticular layer receives but a small supply of blood. The inner surface of the tympanic membrane, the mucous membrane layer, must therefore be attacked first of all, if caries originate in the malleus. If now, in

consequence of a widespread inflammation of the tympanic cavity, the mucous membrane covering the malleus be destroyed, then the vessels of the membrana propria, and finally the periosteum itself, will be undermined and detached. After the loss of these tissues, a granulation rich in vessels spreads in all directions, and finally there remains in the centre of the handle the only remnant of osseous tissue. The caries may still further extend, and at last the head of the malleus may alone remain, held by the ligaments in the upper part of the tympanic cavity. In the occurrence of caries of the handle of the malleus, the destruction of the osseous tissue is principally caused by the production of granulation tissue, and only in the smallest degree by giant cells, by which lacunar cavities are formed at the boundary of the healthy and diseased bone. Moos refers to Pommer's researches, and concludes on the basis of his investigation that granulation tissue plays as great and usually a greater part in the formation of resorption lacunæ than the giant cells, which, according to Pommer, are to be considered the only resorptive organs of the osseous tissue.—*Deutsche med. Wochenschr.*, Jan. 1, 1885.

INCOMPATIBILITY OF SULPHATE OF QUININE AND POTASSIUM IODIDE.—RABUTEAU, in the *Union Pharm.*, 1884, shows that the sulphate of quinine administered with the iodide of potassium causes anorexia, nervousness, and general malaise. These effects are analogous to those occurring if an iodide containing iodate of potassium is taken, the acid of the gastric juice in this case liberating free iodine. According to Rabuteau, the same result obtains from a mixture of iodide of potassium and sulphate of quinine, and the liberated iodine is the cause of the observed disturbances. He further observes that very serious or even fatal results may occur from their use during menstruation.—*Gazzetta degli Ospitali*, Jan. 4, 1885.

SUPRAPUBIC CYSTOTOMY.—D. ROHMER, in the *Annales des Organes Génito-urinaires* for Jan. 1, 1885, after a lengthy discussion upon suprapubic cystotomy in hypertrophy of the prostate, concludes as follows:

1. Suprapubic cystotomy is an operation of great importance in patients with prostatic disease, not only in cases of emergency, but also as a curative procedure in case of absolute retention of urine, incurable by other means.

2. To be efficacious in such cases, the operation should be practised seasonably—i. e., before serious lesions of the urinary organs have been established or become incurable.

THE SURGERY OF SCROFULOUS GLANDS.—MR. T. PRIDGIN TEALE, in a recent lecture on the surgery of scrofulous glands, summarizes his treatment as follows:

1. That our guiding principle should be, in the words of Dr. Allbutt, that, "whenever septic material is contained in the system, we rest not till it be expelled, and its burrows laid open and disinfected."

2. That in a very large number, in a majority, of these instances of scrofulous neck which have come under my care, there was no evidence of any constitutional taint or weakness. The origin of the ailment was clear and defined, bad drains in many instances, scarlet fever,

mumps, etc. The cases were often isolated instances in families free from any tendency to constitutional disease. Health was restored to perfect vigor after the destruction of all degenerate or septic material. The removal of the condemned glands was *very rarely* followed by any further enlargement of glands, or by the need of any repetition of operation.

3. That surgical interference is not only justifiable, but demanded, in the following conditions:

(a) Whenever a sinus resulting from a degenerating lymphatic gland exists.

(b) Whenever fluid—*i. e.*, pus—can be detected in connection with an enlarged lymphatic gland.

(c) Whenever there are enlarged glands accessible to surgery in a patient in whom a caseous or a suppurating gland has been already discovered.

4. As to glands which, not having suppurated, nor having been proved to be caseous in any one instance, are an eyesore, or are accompanied by lowered health, the question of removal may be considered an open one. Probably in some instances the best method of treatment will be by "cautery-puncture."

Of this method Mr. Teale has had no experience, but it is spoken of most favorably by Mr. Treves in his work on *Scrofula and its Gland Diseases*, page 193, and he has employed it extensively.

As to the surgical treatment of these cases, the following are Mr. Teale's conclusions:

1. That surgery can secure the healing in a very few weeks of gland cavities and sinuses, even though they have existed for years, and of wounds resulting from the removal of caseous and suppurating glands.

2. That in dealing with sinuses, gland abscesses, and decayed or semi-decayed lymphatic glands, the action of the surgeon must be vigorous and thorough.

3. That the visible abscess, which would often be called a struvious suppurating gland, is, as a rule, merely a subcutaneous reservoir of pus, its source a degenerate gland being, *not subcutaneous*, but *subfacial*—*i. e.*, under the deep cervical fascia, and sometimes even submuscular, the communication between the two being a small opening just large enough to admit a probe or director.

4. That it is utterly futile to incise or puncture such a subcutaneous abscess dependent upon a degenerate gland which lies beneath the deep fascia.

5. That when a damaged or suppurating gland has been got rid of before the overlying skin is thinned by advancing supuration, the resulting scar is insignificant, and not an eyesore.

6. That in almost every instance in which the cure of the disease by operation was followed by a depressed cicatrix, there had been previously a sinus discharging for months, or even for years.

7. That in dealing with a sinus the channel should be enlarged by the knife or by "Bigelow's dilator" and the whole of its granulating surface should be scraped off. Where a sinus is shallow and covered by thin blue skin, this imperfect covering should be rasped away by the scraper, and any cutaneous overhanging edges should be trimmed off by scissors.

8. That in dealing with a sinus or an abscess the surgeon should not rest content until he has discovered and eradicated the gland, always remembering that if it be not obvious, there is sure to be a small track lead-

ing through the deep fascia to the missing gland. This opening should be enlarged so as to admit the spoon of Lister's scraper.

9. That when a gland has not suppurated, and is movable, it can be removed by very little dissection, almost by enucleation, and that, as the healing takes place rapidly, the resulting scar is very faint and insignificant.

10. That when a gland has suppurated, and generally when it has become caseous, the capsule should be freely opened, and the contents should be eviscerated by Lister's scraper. This is sometimes easy, the evisceration leaving the stiff capsular case virtually cleaned out. Sometimes it is very difficult to get rid, even by most vigorous use of the scraper, of the tough living stump of gland toughly adherent to the capsule. At times it is well to dissect this remnant away by the scalpel, if the risk of injuring important structures be not too great.

11. That sometimes, after such an evisceration leaving an empty capsular cavity, the finger detects in this wall a bulging of a contiguous gland. This should be pricked through the wall of the cavity, and so reached and eviscerated. In this way in more than one instance I have emptied from one external opening a group of three or four glands massed together, in close contact, and suppurating or otherwise broken down.

12. That the following is a good plan of after-treatment. The cavity having been well cleaned by carbolic acid solution 1 in 40, or by carbolized glycerine 1 in 10, is charged with iodoform. An India-rubber drainage-tube, reaching to the farthest recess, is fixed to one extremity of the wound, the edges of which are carefully and accurately brought together by fine catgut suture. The wound may then be covered by a pad of salicylic silk, or some other absorbent antiseptic substance. At the end of a week the India-rubber drainage-tube should be removed. Where a gland and its capsule have been completely enucleated or dissected out, it is not necessary to renew the drainage-tube. In all other conditions the India-rubber tube should be replaced by one of gilt wire, which should remain until there is reason to suppose that all is healed except the track of the tube. This period will vary from three to eight or ten weeks.—*Med. Times and Gaz.*, Jan. 10, 1885.

THE USE OF THE SHARP-EDGED SPOON IN PUERPERAL ENDOMETRITIS.—DR. PLONIES, in the *Centralb. für Gynäkologie*, after citing several cases of puerperal endometritis in which the cutting spoon was used, says: The list of the preceding cases is not sufficiently extensive to enable a decisive verdict to be given concerning the application of the sharp-edged spoon in puerperal and septic endometritis. It seems to be indicated in every case in which high fever depends upon the retention of putrid membranes. The results will naturally be the safer and speedier the earlier the opportunity is taken for operative procedure; and if trial is made of the means proposed, most probably there will result further progress in the future, in the treatment of this so frequently dangerous disease. However, if the cutting spoon is found to be a prophylactic measure against the complication of puerperal endometritis and sepsis of the generative organs, it, nevertheless, will be subordinate to careful antiseptic procedures otherwise carried out.

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THE ANTISEPTIC TREATMENT OF TYPHOID FEVER.

WE presume no one will deny that the therapeutics of typhoid fever as practised to-day is far from satisfactory. This being the case, no treatment which promises more favorable results than have been obtained in the past, should go without a thorough examination of its claims before it is rejected. While the antiseptic treatment of this disease has not been received with much favor in this country, it must also be admitted that the actual trials made with it have been too few to justify any conclusions. We believe, therefore, that our readers will be interested in some further exposition of this treatment than has recently appeared in our columns, especially if it reflect the views entertained by such an authority as M. CH. BOUCHARD, whose paper, read before the International Medical Congress at Copenhagen, is published at length in the *Revue de Médecine*, of Nov. 10, 1884.

M. Bouchard characterizes the two forms of treatment—the antipyretic and the antiseptic—in the following language: The antipyretic method attacks a symptom—the high temperature; it is palliative, not curative, and it permits the disease to culminate and recede spontaneously. But the antiseptic treatment strikes at the cause, and its objects are truly curative. Further, Bouchard does not propose to substitute the antiseptic for the antipyretic treatment, but to associate the two.

In the first place, the extraordinary success of the antiseptic method in surgery makes it not unreasonable to expect similar effects upon internal maladies, although the much greater difficulty in securing the action of the antiseptic upon the agent of the dis-

ease is admitted, since in the latter case it would appear that the economy must be impregnated before an effect can be secured, while in the former the application is direct. Such impregnation, it is alleged, may destroy the patient before it will destroy the microbe of disease. But such reasoning is fallacious; because it is well known that certain substances, harmless to man, are destructive to microbes; certain microbes flourish in solutions of quinine, arsenic, and antimony, and others perish in the same solutions; finally, the infectious agents of certain infectious diseases, such as dysentery, cholera, and diphtheria, are really limited to the surface of organs, and impregnation of the economy is not essential in order to reach them. Further, medical antiseptics does not propose to kill the microbe, but rather to prevent its proliferation. It is not the ferment, but its incessant renewal, which constitutes the disease. A simple change of soil and of climate is sufficient to influence the fecundity of the higher animals and vegetables. The infected organism is a soil for the microbe, and is it not reasonable to suppose that a change of this will affect its indefinite increase? But these speculations have actual support in facts. Sheep, which are very subject to anthrax in the province of Beauce, are rendered unsusceptible to its inoculation when transported to Algeria.

To many, M. Bouchard will appear to be begging the question, when he declares that mercury in syphilis, quinine in intermittent fever, and salicylic acid in rheumatism, the cold bath—indeed, all antithermic remedies—act as antiseptics. In like manner, he considers that quinine reduces the temperature in typhoid fever by its noxious influence upon the vegetable organisms upon which the disease depends. It is, however, necessary to continue the quinine to maintain the antipyretic effect, and the moment the drug is eliminated, the temperature rises, while quinine does not reduce the temperature in the well man. On the other hand, carbolic acid is a true antithermic. It reduces the temperature of the healthy man as well as that of one who is ill with fever. Its antipyretic influence seems to depend upon a physiological action on the organism of the patient rather than on the agent of infection.

M. Bouchard is satisfied from personal experience that carbolic acid will abort typhoid fever, although this action is not without exception. Out of 233 recoveries under its use, in but 22 had he seen the disease last less than two weeks, or from 9 to 13 days, a proportion of 9 to 10 per cent., and the average duration was 23 days. He relates a remarkable instance of this abortive action, not, however, as he says, to be imitated. A young man received on the sixteenth day of the disease, by mistake, an enema of one ounce and a half of carbolic acid, which was, fortunately, promptly expelled. In half

an hour he was in a state of collapse and coma, and the temperature fell from 104° to 95° F. The next day the rectal temperature was 98.6° F., and from this time it did not rise above 100.4° F. Recovery progressed, the typhoid process having been arrested.

Among other antiseptics employed in the treatment of typhoid fever, he mentions chlorine, iodine, sulphurous acid, the sulphites and hyposulphites, mercurials, oil of turpentine, creasote, thymic acid, benzoic acid, salicylate of bismuth, boracic acid, iodoform, resorcine, kairin, antipyrine.

Of the mercurials, calomel has been especially used, generally in large doses at long intervals. But Serres and Becquerel have administered continuously the black sulphuret internally, and externally by friction, although not to the production of salivation.

On the other hand, Dr. Salet, at the Hospital Saint-Germain, gave calomel in doses of 1.5 grains every hour until stomatitis was produced. Bouchard himself has collected 31 cases treated by this method, of which only 2, or 6 per cent., died. In those who recovered, the average duration of the disease was about 20 days. Two-thirds of the cases recovered in three weeks or less. In one-tenth of the cases, only, was the duration more than 25 days. Stomatitis was produced 18 times, on an average, after 9 days of treatment. In the thirteen cases in which stomatitis did not occur, the average treatment was about 10 days. The two who died were under treatment only 7 days, and the calomel seemed even in these cases to have exercised a favorable influence. The stomatitis was never serious, and disappeared rapidly under appropriate treatment.

Notwithstanding these favorable results, and that he believes calomel exercises a specific action and neutralizes the agent of infection, M. Bouchard admits that his own observations show that mercury diminishes the vitality of the patient, that convalescence is slow and tedious, that anæmia persists, and that strength returns slowly. He has also noted more frequent intestinal hemorrhages and dysenteric evacuations, and after recovery he has seen epistaxis, diarrhoea, pneumonia, and endocardial vegetations. Finally, he has found relapses more frequent—once in five cases. In a second series of cases in which he had used the mercurial subcutaneously, he found pneumonia and endocarditis less frequent.

As the result of these facts, M. Bouchard is not able to decide upon the practical utility of mercurials in the treatment of typhoid fever, but his clinical observations justify him in concluding that mercury, even in minimum dose, is competent to hold in check the development of the typhogenous microbe.

Antisepsis may, however, be advantageously used locally as well as generally. For nine years past, M. Bouchard has been in the habit of administering

charcoal to his typhoid fever cases, not with a view to acting upon the typhogenous agent inhabiting the intestinal canal, since it is well known that putrefaction is not in the least affected by charcoal, but to absorb the product of the intestinal fermentations, and thus overcome the offensiveness of the intestinal contents. In this manner not only do the fecal matters lose their fetidity, but are made altogether inodorous, and furnish, on filtration, a colorless liquid. Thus, too, Bouchard believes that a large proportion of the alkaloidal substances known as ptomaines, which he discovered to be a constituent of normal fecal matter in 1882, and which are enormously increased in typhoid fever, are destroyed, and the toxic effect arising from their absorption avoided.

To secure antisepsis of the digestive tract, he combines iodoform with charcoal, of which ten grains are dissolved in three and a quarter ounces of sulphuric ether, and to this are added three and a quarter ounces of powdered vegetable charcoal. After evaporation of the ether, the carbon-iodoform is incorporated with six ounces of glycerine, thereby securing very minute subdivision and an enormous surface. Of the mixture, a tablespoonful, diluted with half a glass of water, is given to the patient every two hours. With a view to showing the effect of such a treatment, Bouchard ascertained that the injection into the veins of a rabbit of the extract of four and a half drachms of normal fecal matter per kilogramme of the weight of the animal produced death by convulsions in less than a minute. He injected in the same manner the extract of six and a half ounces of the fecal matter of a typhoid patient treated with the iodo-carbon, without any inconvenience whatever to the animal.

Under this treatment, he has seen the hospital mortality of typhoid fever fall from 20 to 10 per cent., and by the use of charcoal alone, to 15 per cent. In cases thus treated, also, he had noted the absence of odor in the intestinal contents of those dead of the disease, and a cleanness of the ulcers, which did not present the usual pultaceous appearance. The urine is less high colored. In lieu of the usual earthy complexion, the skin is remarkably clear, the tongue remains almost always moist, and bed-sores are extremely rare.

During such treatment, it is important to regulate the bowels in order to prevent accumulation of the charcoal.

As stated at the outset of this article, such results as these certainly demand a more thorough examination of this treatment, and justify the very modest conclusion of M. Bouchard, that while medical antisepsis has not yet secured all that has been promised, it has nevertheless realized some therapeutic progress.

Appropos of the above iodo-carbon local treatment, it is interesting to note that Bouchard has used it

in other diseases which are accompanied by excessive fermentation in the digestive canal, such as dilatation of the stomach, and putrid diarrhoea with or without ulceration. He has also resorted to it in cases in which fermentation is normal, but in which oliguria or renal impermeability prevents the sufficient removal of the agents causing the toxic effects known as uræmia, but which, according to his views, deserve rather the term stercoræmia.

CHOLECYSTOTOMY AND CHOLECYSTECTOMY.

In the issue of THE MEDICAL NEWS for December 20, 1884, we presented our readers with a summary of the existing state of our knowledge of cholecystotomy and cholecystectomy. Of 27 examples of the former operation, analyzed at that time, 6, or 22.22 per cent., perished, while all of the 4 cases of excision of the gall-bladder recovered. The conclusions at which we arrived were, first, that in the operation of incision the use of sutures was dangerous on account of the periodical filling and emptying of the gall-bladder, and the risk of the escape of its contents into the peritoneal cavity; and, secondly, that, in view of the comparative safety of cholecystotomy, extirpation of the viscus exposes the patient to a needless risk, and that it should, therefore, be abandoned.

In the few weeks that have elapsed since the appearance of the article referred to, additional recorded examples of both procedures tend to show that these objections are not so weighty as we had supposed them to be at the time at which they were framed. In the case of Meredith, quoted by Morris in the *International Encyclopædia of Surgery*, Vol. V. p. 1073, the incision was closed with sutures and the organ returned into the abdomen. At the post-mortem examination, death having ensued in forty-eight hours from suppression of urine, the gall-bladder contained nearly a half pint of thick bile, and the duodenum contained a considerable quantity, thereby showing that the periodical filling and emptying of the organ had exerted no effect whatever upon the stitches. Hence, we may conclude that the objection has no foundation in fact.

In the *Berliner klinische Wochenschrift*, Nos. 51 and 52, 1884, LANGENBUCH records 2 additional examples of cholecystectomy, making 5 in all that he has performed. In the fourth case, an ulcerative perforation of the cystic duct close to its junction with the hepatic duct permitted the escape of bile into the peritoneal cavity, and caused the death of the patient. The existence of the opening was not suspected, as a thorough examination of the ducts was prevented by the presence of large masses of fat. The remaining cases recovered. Adding to these operations the 1 of Courvoisier, 6 cholecystectomies

have yielded 5 recoveries, and 1 death, or a mortality of 20 per cent. 32 cholecystotomies, on the other hand, show 25 recoveries and 7 deaths, or a mortality of 21.87 per cent., and in three cases a permanent fistule remained. Hence, from a purely operative standpoint, extirpation is a slightly less dangerous procedure than incision.

In the present state of our knowledge it may be declared that neither operation is justifiable unless the common duct is patulous and icterus is absent. Under these circumstances, in recent cases, cholecystotomy should be resorted to; but should the coats of the gall bladder be ulcerated, or should the viscus contain adherent connections threatening perforation, excision is indicated. In favor of the latter operation in all cases it may be mentioned that recurrence of the trouble is completely obviated, and that it does not appear to be attended with greater risk than does incision. For these reasons, a more extended experience may show that cholecystectomy is not so "intrinsically absurd" a procedure as Mr. Tait declares it to be.

EXTERNAL MIGRATION OF THE OVULE.

As is well known, the ovule set free by the rupture of the ovisac passes through the oviduct of the same side to the uterine cavity; thus, when the ovule is furnished by the right ovary it enters through the right oviduct to the uterus. But occasional cases were observed in which, for example, the recent corpus luteum was found in an ovary, the corresponding oviduct being obliterated, and hence the natural conclusion followed that an external migration of the ovule had occurred, by which it had passed over to the opposite oviduct, and through it had entered the uterus.

Experimental proof has recently been given of the truth of the hypothesis just stated. DR. BUZZI, (*Annales de Gynécologie*, January), wishing to study extrauterine pregnancy, tried to produce this result in ten rabbits upon which he experimented. He removed in some cases the ovary of one side, and tied the abdominal end of the oviduct of the opposite side; in others he removed the ovary, and then tied and divided the uterine end of the oviduct. Of course in the latter case, supposing the left ovary to have been removed and the oviduct tied and divided, the spermatozooids might pass through from the uterus to this opening, and thence in the abdominal cavity to the right ovary. He hoped by the difficulties thus put in the way of the migration of spermatozooids and of ovules to cause an extrauterine pregnancy. The animals were placed with a male, and after some months one of them had young, and it was then killed. Examination proved that the ovules impregnated came from the right

ovary, though the right oviduct had been tied and divided, as has been stated, just at its entrance into the wall of the uterus. Further, the impregnated ovules had gained the uterine cavity through the left oviduct. The proof thus given of the external migration of the ovule is conclusive; it cannot be invalidated by the possibility, which has been suggested in regard to the ovule in the human subject where such migration was alleged, that the obliteration of the oviduct occurred after impregnation.

THE BACILLUS OF TYPHOID FEVER.

IN his paper on "The Antiseptic Treatment of the Acute Infectious Diseases," read before the Eighth International Congress, at Copenhagen, M. Bouchard describes a bacillus, the study of which he has pursued for five years, and has found in all the pathological new formations occurring in connection with typhoid fever, except the sudamina. He considers this microbe to be the causal agent of the disease, although he admits that he has been unable to prove this with certainty, because, having introduced it into the digestive tube of the guinea-pig, the rabbit, dog, and pig, he has never been able to induce a disease similar to typhoid fever, while the morbid conditions he was able to provoke did not secure immunity from the true disease.

The microbe is easily cultivated in bouillon; its proliferation is prevented by the biniodide of mercury in the dose of one-third of a grain to the quart of bouillon, while half a grain is necessary to arrest the multiplication of the bacterium which produces spontaneous alteration in bouillon.

REVIEWS.

SIXTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF ILLINOIS. With two Appendices: A.—Conspectus of the Medical Colleges of America. Revised to December 20, 1884. B.—Official Register of Physicians and Midwives in Illinois. Revised to December 1, 1884. 8vo. pp. xxiv. 103, xxvi. 96, xv. 324. Springfield, 1884.

THIS useful volume, in addition to the report of the Proceedings of the Board, contains much valuable information, going to show the absolute necessity of some supervision of the practice of medicine in the States; it contains a conspectus of the Medical Colleges of America, revised to December 20, 1884, and preceded by an admirable Review of Progress in Medical Education. The conspectus contains the title, location, address of corresponding officers, organization, curriculum of study, requirements for admission and graduation fees, number of matriculates and graduates of all medical schools in the United States and Canada, whether existing or extinct, regular or irregular, fraudulent or honest. This list is simply invaluable to any one who has to do with Medical Colleges. For nowhere else is

so much valuable, well-arranged information contained in so small a space.

In addition, the volume contains a complete list of physicians and midwives to whom certificates have been issued since the organization of the State Board of Health, as well as of those whose licenses have been revoked, so that it is an official list of the practitioners of the State of Illinois.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 27, 1885.

THE PRESIDENT, R. F. WEIR, M.D., IN THE CHAIR.

DR. W. T. BULL read a paper entitled

A SUCCESSFUL CASE OF LAPAROTOMY WITH ENTERORRHAPHY FOR GUNSHOT WOUND OF THE INTESTINES.

(See page 171.)

DR. SANDS considered Dr. Bull's case to be one of great value as a contribution to abdominal surgery, and as calculated to encourage a resort to operative measures in the treatment of penetrating gunshot wounds of the abdomen. Of course, it was desirable to avoid abdominal section, if possible, in desperate cases, and in cases in which spontaneous recovery seemed probable. In Dr. Halsted's case the operation was not undertaken with much hope of saving life. The most important question relating to practice is, How shall the doubtful cases be excluded? The evidence of penetration of the intestine is in most cases uncertain. In very few instances, so far as his experience and knowledge went, even where the intestine was perforated, was there a demonstration of the fact, by an escape of feces or intestinal fluid from the opening in the abdominal wall. Dr. Bull, in his case, does not seem to have satisfied himself by probing, that the bullet had even entered the abdominal cavity. On the other hand, there are some cases in which there is reason to suspect that a bullet has perforated the hollow viscera within the abdominal cavity, but in which some doubt is afterward felt on this point, in consequence of the prompt recovery of the patient. Dr. Sands would like to ask Dr. Bull, What symptoms convinced him that his case was one of perforation of the intestine? If, in doubtful cases, this point could be settled, it might be the duty of the surgeon, in the light of the success obtained by Dr. Bull, and in view of the almost uniform mortality of such injuries, to open the abdomen, a procedure which might afford the only means of saving life.

DR. BULL thought it was generally acknowledged that it was impossible to name any particular symptoms which indicated positively that the intestine had been wounded. It had been stated by authors that if there was general tympanites, and blood escaped by the rectum, one could infer that the intestines had been wounded; a large number of authorities had stated that there was no way to determine whether or not the intestines have been perforated. Dr. Parkes, of Chicago, in a paper read before the American Medical Association, in which he detailed the results of a series of experiments performed on animals, stated that as a result of his experiments it was impossible to form any con-

clusions from the symptoms as to the direction in which the bullet went, and also as to the amount of damage which it may have done, except within certain limitations. Dr. Bull thought it not right to say that in the absence of symptoms the intestines are probably uninjured. These considerations, and the fact that in this man's case it was uncertain whether the wound entered the cavity of the abdomen or not, led him to explore the bullet wound first, and when it was found that the wound did enter the cavity, the abdominal section was made. It seemed to him that the difficult question was not so much what kind of cases are we to operate upon, as what kind of cases is it not desirable to operate upon. Dr. Halsted had mentioned a case, which was a very desperate one from the first, but, at the same time, it was one of those cases which would certainly terminate fatally without interference, and he thought interference in such cases was justifiable, if there was prospect that the patient could sustain the operation. This was difficult to determine. Therefore, given an abdominal wound, with the patient in good condition, without any symptoms which enable the surgeon to determine whether or not the intestines have been perforated, he believed it proper first to explore the wound, and if the wound was found to enter the peritoneum, also to enter the peritoneal cavity by operation, and endeavor to remedy the damage done.

DR. STIMSON asked if laparotomy had ever been successful after feces had been extravasated into the abdominal cavity.

THE PRESIDENT was under the impression that such cases were on record. He also remarked that it was difficult to form an opinion with reference to the amount of damage done in cases in which the symptoms of collapse were very marked, as in Dr. Halsted's case. The second case reported by Dr. Bull was one in which he assisted the operator, and also in deciding the question as to whether or not the operation should be performed, and he readily recalled the difficulty in reaching a conclusion as to whether the shock came from injury of one of the viscera or whether it came from hemorrhage. He thought it utterly impossible to determine this question positively, and believed it to be justifiable to make an exploratory incision, and to examine with the fingers, or, better still, in cases of suspected hemorrhage, to introduce a small sponge attached to a sponge-holder.

DR. SANDS inquired of the surgeons of the Presbyterian Hospital, who might be present, as to the exact nature of a case in that institution which was supposed to be one of perforating wound of the stomach, and which recovered without operation. If it could be proved to have been a case of perforation of the stomach or intestine, it would show that nothing could have been gained by surgical interference. He thought it impossible at present to formulate our experience so that it would enable us to determine positively when to operate.

DR. STIMSON thought it possible that a ball of small calibre could perforate the stomach without causing an escape of the contents of the stomach into the peritoneal cavity.

DR. BRIDDON remarked that there was a class of cases in which it was doubtful whether or not the operation of laparotomy should be performed, and one

question to be decided was, whether perforation of the intestine had taken place. At one time he regarded shock as a very important symptom in deciding this point, but had subsequently given it up, inasmuch as the condition of shock varied so greatly in different individuals.

DR. BULL said that, in the class of cases referred to by Dr. Briddon, if the intestines are not found perforated after an exploratory incision, he would not consider that the patient's chances had been very much impaired by the operation. If the gut is not damaged, no special harm will be done by making an exploratory incision, and if it has been perforated, there are many chances in favor of recovery after the operation. He thought that his attempt in the case which he reported was influenced by the history of a case which he saw four or five weeks before his patient came under his observation.

It was that of an Italian woman, 35 years of age, who was shot in the belly, the ball entering just below and to the left of the umbilicus, and in which there was no more evidence of damage done to the contents of the abdominal cavity than in the patient upon whom he operated. For a week no one was able to say whether or not the woman had peritonitis, but gradually symptoms increased, and she had well-marked suppurative peritonitis. An abscess formed near the umbilicus, and extravasation of feces took place, secondary hemorrhage with the loss of only about two ounces of blood occurred from the epigastric artery, and the patient died. At the autopsy it was found that the intestine had been perforated by the bullet at only two places; one in the sigmoid flexure, and the other in the ileum. As soon as he learned the result of the autopsy, it occurred to him that there were but two wounds of the intestine, and that the patient was in good condition when she entered the hospital; and that abdominal section with such trifling lesions to deal with would have offered every chance of success. If he should see such a case to-morrow, he should feel that the best advice which he could give would be to have an exploratory incision made.

Dr. Bull thought that if members present would recall autopsies in cases of gunshot wounds, they would find that the number of perforations in some of them had been very small; and also that it was doubtful if a case of recovery could be recalled in which there was undoubted clinical evidence of intestinal perforation.

DR. SANDS said that, in cases like those mentioned by Dr. Bull, he should feel strongly inclined to follow the practice which he adopted. In the case of Dr. Hinton's, in the Presbyterian Hospital, the bullet, which was a small one, entered from behind, and it would have been almost impossible to follow its track through the tissues which it penetrated, but where the wound was in front, it could be readily explored, and the operative procedure adopted by Dr. Bull would doubtless commend itself as judicious. He should be disposed to operate promptly in such cases as these, as a preventive measure, rather than to perform laparotomy in cases in which the patient was apparently in a hopeless condition.

DR. MARKOE said that, on the other hand, it was but right to take up the opposite view of the question. He remembered a patient who was brought into the New York

Hospital some years ago, a sea-captain, who had received a pistol-shot wound while attempting to suppress a mutiny. He was standing upon the rail of his ship, and the mutineer was below him, so that probably the bullet entered the abdomen from below upward; it entered upon the left side, midway between the umbilicus and the superior spinous process of the ilium. The patient was brought to the hospital, after considerable delay. There was no evidence of fecal extravasation or hemorrhage, and the shock was moderate. The patient was in exceedingly good condition. Peritonitis and death, however, were expected, but the case progressed from day to day without the development of peritonitis, and the patient recovered without a single bad symptom. To be sure, it may be said, and it was said at the time, that it was a case in which the ball had evaded the hollow organs, and had slipped off somewhere to one side and become encysted, and who could settle the question, whether or not the internal organs were wounded? He simply mentioned the case because it was only fair to have both sides of the question presented.

DR. SANDS said that the case mentioned by Dr. Markoe, recalled to him one in which a bullet was found encysted in the great omentum in the body of a dissecting-room subject. When the bullet was discovered, a further examination was made in order to determine, if possible, the course it had followed, and a cicatrix was found in the back over one of the lower intercostal spaces on the right side. There were also found adhesions between the opposed pleural surfaces, a cicatrix in the diaphragm, one on the upper and another on the under surface of the liver.

THE PRESIDENT referred to a case which he saw during the war, in which there was found a lodgement of a bullet in the omentum, where it hung suspended in the abdominal cavity. He also remarked that the cases of gunshot wounds which presented themselves in our civil hospitals were made at short range, and that experiments conducted on many cadavers in the late war showed that in nearly every instance such wounds involved the solid or hollow viscera. While opposing the usual ostrich principle and advocating a bolder treatment in penetrating gunshot wounds, he thought that Dr. Bull had laid too slight stress upon the danger of exploratory incision. He had been struck with that fact in laparotomies for intestinal obstruction done by himself and witnessed in practice, where the exploration necessitated the taking out of the entire intestines in the hunt for the point of obstruction. He had not yet seen a case in which such a general overhauling of the intestines had been followed by recovery, and he, therefore, thought it well to distinguish between exploration of the peritoneal cavity and exploration of its contents.

For some time past, with regard to Neuber's intestinal plug, to be in readiness for a case of intestinal obstruction, he had provided himself with several large-sized gelatine vaginal suppositories, also with several pieces of the largest sized macaroni, to be used singly or in bunches, and also sections of the finger rolls, used at dinner, were at times put into the intestines to stitch the gut over and allow them thus to remain in situ to be subsequently dissolved. He had not, however, had opportunity to use any of these articles. Freres's rubber bags, which he had shown at a previous meet-

ing of the Society, were easily collapsed by an incautious puncture of the needle.

DR. LANGE remarked that, interesting and instructive as Dr. Bull's case was, it admitted the question whether in this individual instance the patient's life could not have been saved without the operation. At the time of the operation the patient was in a fairly good condition; there was no evidence of peritonitis, and the patient's general condition was such, seventeen hours after the injury, as to render it exceedingly probable that no extravasation of the contents of the gut had taken place. He would like to ask Dr. Bull if, taking into consideration the condition of the parts injured found at the operation, the closure of the small wounds by apposition of gut and fibrinous deposits, and the nature of the exudation, if he would regard the recovery of this patient as improbable without operative interference? Second, he would like to ask if Dr. Bull thought it possible that, a number of injuries of the intestine being present, there might have been some probability that manipulations of the gut could have reopened some of the bullet holes, and allowed infection of the peritoneum to take place in consequence of the operation itself.

His remarks did not in the least diminish the value of the operation so far as it was an exploratory operation, but the question was, What had the operation afforded? What did it do? The operation cleaned the peritoneal cavity, it is true.

Dr. Lange thought that the indications for an exploratory operation were far more clear in cases in which a short time after injury the symptoms of peritonitis were present than in those in which they were absent, for such a length of time as in the case reported by Dr. Bull.

DR. BULL replied that it was impossible to answer whether or not the wounds would have remained closed. Where so many wounds had been made in the intestine, even if no fecal contents escaped at the time of making them, a sufficient amount of irritation would be produced to give rise to peritonitis; and, moreover, the liability of foreign matter being introduced by the bullet, which would produce damage entirely independent of the wounds of the gut. He would say that in a patient with seven wounds in the intestines there were next to no chances of recovery by any conservative plan of treatment.

DR. BRIDDON asked if eversion of the mucous membrane did not interfere with the process of repair, if the wounds were left alone.

DR. LANGE replied that it did so far as the mucous membrane extended, but he did not see why the peripheral part might not be closed.

DR. BRIDDON remarked that mucous membrane would not unite with the peritoneal covering, and if left to themselves, would not small abscesses form at the site of eversion?

DR. LANGE replied, not necessarily.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Friday, January 2, 1885.

THE PRESIDENT, RICHARD A. CLEEMANN, M.D.,
IN THE CHAIR.

DOUBLE UTERUS AND VAGINA.

DR. WM. GOODELL described a case which had been sent to him on account of pain in the back, various

nervous symptoms, and difficult coition. The vagina was double throughout its entire length. Entrance had apparently been effected indifferently on either side of the septum. The cervixes were united like the barrels of a double-barrelled gun. There was a slight divergence of the upper third of the fundus. The sound entered three inches into each cavity. The septum vagina was divided up to the cervix, and her physician reports great relief to the general symptoms.

DR. C. McCLELLAND described a similar case. Pregnancy had progressed to the third month when the case came under his observation. The vaginal septum was complete. The external contour of the cervix was normal, but the septum, extending from the os to the fundus, divided the cavity into two parts. The prominence of the uterus was greater on one side of the abdomen. The sound was not passed. The vaginal septum was divided shortly before labor. A living child was delivered. About the third day after delivery, a mass, apparently of decidua, was thrown off after three or four hours of labor pains. After involution was complete, sounds were introduced into the uterine cavities, and the handles diverged one and three-fourths inches. A second conception occurred afterward on the other side of the uterus.

DR. GOODELL some years ago had under his care a case which he at first diagnosed as an extra-uterine pregnancy, as he apparently found the uterus empty, passing the sound into it, while undoubted signs of pregnancy existed. The fetal tumor was larger toward one side of the abdominal cavity, while the uterus was deflected to the other side. He saw the patient every two weeks, and made frequent careful examination. He sent the patient to the University Hospital, and fixed a day for operation. One day, while lecturing on the case, he had his hand on the abdomen of the patient, and felt a contraction and hardening under his hand. This so resembled the action of uterine tissue that he sent the patient to the Preston Retreat for observation. She was delivered spontaneously.

There was but one cervix and one os, but there was a uterine septum higher up, dividing the cavity into two parts.

DR. HARRIS remarked that the observer, in these cases, is liable to be deceived because the enlargement of the uterus causes it to rotate, the empty half of the uterus admitting the sound in the median line. The uterus, too, is generally poorly developed, as this form of uterus is probably the result of arrest of development, and its thin walls do not give, to the palpating hand, the normal sense of thickness and resistance.

DOUBLE OVARIOTOMY, WITH UNUSUAL COMPLICATIONS.

DR. W. H. PARISH reported the following case: In September, 1884, I saw, in consultation with Dr. M. O'Hara, a lady who had been under his treatment for a number of months. She was 52 years of age, and of exemplary habits. The menopause had been established for a number of years, and she had enjoyed good health until a few months ago. In June, 1884, she noticed, for the first time, that her abdomen was enlarged. In July she consulted Dr. O'Hara, narrating symptoms of indigestion. In August the abdomen had become so enlarged as to occasion concern on the part of the patient, and she had submitted to an examination

by Dr. O'Hara. About August 15 Dr. De F. Willard saw her, in consultation with Dr. O'Hara, and the diagnosis of ovarian tumor was coincided in. On September 6 I saw the patient with Dr. O'Hara, and also diagnosed ovarian tumor. The physical signs were the usual ones characteristic of ovarian tumor. There was distinct resonance in each flank, and no indication of fluid in the peritoneal cavity. The abdominal distention had become very considerable, occasioning no little interference with respiration, and was associated with slight cedema of the lower extremities and general emaciation. Removal by operation was urged upon the patient, but was positively refused. After the lapse of ten days I again saw her with Dr. O'Hara. The difficulty in respiration had so greatly increased as to prevent sleep, except in the semi-erect position. But little nourishment had been taken, and exhaustion had correspondingly increased. In the erect position the pulse was 160 per minute; in recumbency, 130. The abdomen measured forty-five inches at the umbilicus. Its shape had changed since my previous visit. In the flanks there was distinct bulging, with fluctuation and percussion dulness. I diagnosed peritoneal dropsy as a complication of the ovarian cyst. The cedema of the lower extremities had increased. The patient had requested that she be tapped, and it was with reluctance that I consented to resort to that measure. On September 14, with the assistance of Drs. O'Hara and J. B. Roberts, I attempted to diminish the size of the abdomen by tapping the cyst, using for that purpose the ordinary trocar and canula. Only a few drops of thick gummy substance were obtained. The cyst contents were too thick, too jelly-like, to run through the canula. But a single puncture was made. The patient now gave her consent to the performance of ovariectomy.

September 16.—The patient has been fed and stimulated as her condition demanded or permitted. Pulse 120; resp. 40; temp. 98 $\frac{3}{4}$ ° F. As yet no apparent disturbance from the tapping.

17th.—Pain referred by the patient to the bowels; three movements, probably resulting from indigestion.

18th.—Operation performed; previous to the operation, pulse 130; resp. 40; temp. 99° F. Tongue dry and brown. Bowels moved twice during the night. Still has pain, supposed by the patient to be in the bowels. There were present: Drs. O'Hara, A. H. Smith, J. B. Roberts, and McElroy. The patient was etherized by Dr. Roberts, and the usual incision along the linea alba was made. The tumor was found to be adherent to the anterior abdominal wall. An attempt was made to break up these adhesions, but the cyst-wall was so extremely thin that the cyst was soon torn into. Its contents were too gummy to flow, and it was necessary to scoop out this substance with the hand. The contents had the consistence and appearance of calf's-foot jelly, and was adhesive like gum, sticking to the hand so that it was necessary to strip it from one hand with the other. There were numerous slight adhesions to the intestines, but as the cyst-wall was so extremely thin, these adhesions were not troublesome, portions of the cyst-wall being left attached to the intestines. It was soon discovered that the cyst-wall had ruptured prior to the operation, and that every portion of the peritoneal cavity contained quantities of the colloid material and masses of dark grumous blood. The contents had doubtless

escaped gradually from a rent in the upper posterior portion of the cyst several days before the tapping. It was the presence of this material in the peritoneal cavity that led me to diagnosticate the coexistence of peritoneal dropsy. There was no serum in the peritoneal cavity. Washing the peritoneal surface with water would not remove the colloid material, and it became necessary with hand and sponge to remove it from the under surface of the liver, from about the spleen and kidneys as well as from among the intestines. After emptying the large tumor, it was discovered that there was a smaller one about the size of a foetal head, unbroken and without adhesions, and partly pressed into the pelvis by the superincumbent large one. The two tumors presented the same characteristics. They had thin transparent walls with numerous internal alveolæ and thin septæ, with gummy colloid contents. About the base of each, but especially of the larger, there was a limited amount of solid substance. The pedicle of each was ligated and dropped into the abdomen. Each tumor evidently grew from an ovary. The general peritoneum, wherever it could be seen or felt, presented innumerable cysts with walls and contents like those of ovarian cysts. These peritoneal cysts varied in size from that of a millet seed to that of a pea. Many of the larger ones were ruptured by the hand or sponge. These minute cysts were not arranged in clusters with stem-like attachments to the peritoneum, but were isolated, and had the appearance of blebs on the peritoneal surface. The peritoneum presented general injection of its capillaries, with slight roughening of its surface, but there were no evidences of active or decided peritonitis. The hemorrhage was but trifling, and but few ligatures were applied. The abdominal incision extended about an inch above the umbilicus. A glass drainage-tube was introduced at the lower angle of the wound, and the remainder of the incision was closed with silver sutures. At the close of the operation, shock was not great; pulse 134. Morphia was given, and the patient passed a somewhat comfortable night. No vomiting.

19th.—Morning, pulse 138; resp. 34; temp. 100° F. Evening, pulse 140; resp. 30; temp. 102° F. Vomited a little, and abdomen somewhat distended. Face pale, and features pinched. Three ounces of pinkish serum removed from tube. Vomiting checked by swallows of hot water, and a mixture containing creasote and sodii bicarb. Tube washed out with carbolyzed water.

The third night the patient was restless, and vomited. Next morning, pulse 150; resp. 26; temp. 101½°; increased stimulants, and at noon pulse was 138; resp. 26; temp. 100¾°. Fourth night, slept some, less vomiting; she takes koumiss, and retains it. Next morning, pulse 140; resp. 20; temp. 100¼°. Fifth night, pulse 120; resp. 22; temp. 101½°, stronger. Three ounces of a somewhat offensive fluid were taken from the tube; bowels were moved spontaneously. Sixth night, she slept well; pulse 114; resp. 23; temp. 101½°; sutures removed, union complete. Tube slipped out, and could not be introduced again. It left a canal with healthy granulating walls. Seventh night, vomiting returned; she did not receive the usual amount of stimulants during the night. Exhaustion and vomiting increased, without additional rise of temperature, and patient died on the ninth day. The death was doubtless due to exhaustion. The dis-

ease of the ovaries and of the peritoneum was doubtless colloid cancer. The tumors and the material removed from the peritoneal cavity weighed fifty pounds. It seems right to conclude that had the tumors been removed in their earlier stages, the patient would have most probably recovered from the operation, and have remained exempt from the disease for months or years, or perhaps permanently.

DR. MONTGOMERY spoke of the advantages of early operation before peritoneal involvement. He also alluded to the dangers of tapping. He gave a short history of a case of ovariectomy with colloid contents, and recovery from the operation, but followed by death six weeks later from cellulitis and ascites, the cause being unknown.

DR. BAER related a somewhat similar case, in which the patient recovered, but is now apparently dying from a recurrence of the disease in the upper part of the abdomen.

DR. PARISH, in closing, said that the tapping was done with reluctance, but did no harm in this case. The peritoneal complication made the case hopeless.

OFFICERS FOR 1885.

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NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 5, 1885.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D.,
IN THE CHAIR.

THE STATISTICAL SECRETARY, DR. F. V. WHITE, announced the

DEATH OF DR. JAMES OWEN WHITE,

on January 30th, of disease of the kidneys, in the eighty-third year of his age. He was born at Cocksackie, Greene County, N. Y., and graduated at the College of Physicians and Surgeons, New York, in the year 1823. He had been a Fellow of the Academy since 1853.

THE PRESIDENT then introduced a number of

DISTINGUISHED VISITORS,

including Drs. John S. Billings, U. S. A., of Washington; S. Weir Mitchell and Theophilus Parvin, of Philadelphia; and George B. Shattuck and James R. Chadwick, of Boston. The venerable Dr. James Anderson, one of the ex-Presidents of the Academy, and Prof. Alfred C. Post were also invited to take seats on the platform.

THE PRESIDENT, DR. BARKER, then delivered a *Valedictory Address*, after which he resigned the Chair to

the PRESIDENT-ELECT, DR. A. JACOBI, who then delivered his

INAUGURAL ADDRESS.

After expressing his thanks for the honor done him, and his appreciation of the responsibilities of his position, he alluded to the brilliant qualities of his predecessors in the Presidency, and said that the only thing that reconciled him to accepting that position was the flourishing condition in which they had left the Society. Having again expressed his thanks for the honor conferred on him, he made the request that every Fellow would consider the interests of the Academy under his personal charge.

He described the Academies of Medicine in Europe, which were made up of a few men who were preëminent for their achievements, each in his special department, and said that the New York Academy was of a more democratic character, and it was desirable that the many reputable practitioners should gather round its flag. Like the Union, it is a voluntary confederation, who make their own laws, and obey them, because they are of their own making. Almost all were men busily engaged in active practice; none devoting themselves entirely to study alone. Anglo-Saxon medicine has never forgotten that the aim and end of all medical science are the treatment and treating of the sick, and that every special study is but a means to obtain that end.

In New York, he said, there were too many societies, too much subdivision, and it would be better that the profession should concentrate its energies more in the prosecution of scientific work. All the various special societies, he thought, might well have been sections of the Academy of Medicine, as they could still have remained practically independent organizations.

The practical tendency of this Academy, he said, corresponds with the peculiar practical nature of the development of medicine in the English-speaking nations from the last century onward. Even the most fragmentary study of that development is of great interest indeed. Altogether, medicine in the eighteenth century exhibits a peculiar character. It is true that knowledge was not widespread, but the heads of the profession were capable, painstaking, searching, cool-headed men, good observers, and excellent describers. There was a large number of good monographs, excellent histories of cases, and fair diagnoses of the general condition of the patient. Local diagnosis, it is true, was mostly out of the question, since no sooner than in the second half of that century Morgagni collected in his illustrious work, *De Causis et Sedibus Morborum*, all of the only three thousand post-mortem examinations which had ever been recorded in all ages and countries. Their judgment was sound, their therapeutics—though often exuberant—safe. As the scientific language of most of them was the same, Latin, their spirit was not local nor national. The same class of men were found in Germany and the British possessions; also in Holland and France. In the former, we meet the names of Werlhof, R. A. Vogel, Zimmermann, Lentin, Van Swieten, J. P. Frank. There was also Auenbrugger, who ought not to have been so readily forgotten. In Great Britain there were Mead, Huxham, Fothergill, Pringle, Heberden, Monroe, Home, Cullen,

there was that giant John Hunter. In America, we had Bard and Rush. In France, Levret. In Holland, at an early date, Boerhaave. The only fanatical theorist of all the English writers was John Brown; the only obscurist, who ought to have had a place in Germany between 1800 and 1840, was Robert Jones, with his *Inquiry into the State of Medicine on the Principles of Inductive Philosophy* (1782). When Broussais reigned supreme in France, his doctrines were welcomed by a great many in England. But the Anglo-Saxon mind is not easily drawn away by theories, and there is after all more solid work in Broussais than wanton theory only. Thus the English literature of the early part of this century teems with good observations and monographs by many more than those I here mention—Travers, Williams, Crawford, Astley Cooper, Brodie, Bell, Abercrombie, Cheyne, Pitcairn, Bright, Hope, and Carswell. Of French names I have mentioned but one.

The redemption of France, after a century of almost unparalleled corruption and misery, begins with its great Revolution. Never before did fate grant to an unhappy nation a larger number of great spirits, both in politics and science. The faint impression the freer institutions of the British Island made on French literature would not have influenced the development of the country for centuries to the same extent as did the necessities of the population. In the history of political and mental development changes more or less sudden or gradual appear to be the rule; rise and decline change off, as the fertility and sterility of a corn-field. The fertility of France lasted a long time. While the greatest man in its political world could not do better than spread all over Europe part of the results of the French Revolution, through violence and murder, a young scientist revolutionized medical science by genius and hard work. That is what Bichat did when he studied the physiology and pathology of the organic tissues. Since that period, France has marched at the head of medical science for about half a century. Pinel, Corvisart, Cruveilhier, Bieth, Cazenave, Gibert, Laennec, Ricord, Civiale, Guérin, Guislain, Baillarger, Leuret, Longet, Guersant, Taupin, Valleix, Legendre, Dupuytren, Trousseau, Rilliet, Barthez, Durant-Fardel, Orfila, Louis, Broussais, Piorry, what a host of illustrious names, and by far not the only ones who will recall the glory of the French nation when there will be no longer a political France. It is true that a decline has set in. The number of really great men in modern French medicine is but limited. Charcot's name overshadows the reputation of all others, and, it appears to me, will live for centuries. It may be also that Pasteur will be recognized as a fixed star in the scientific sky if he will succeed in divesting himself of the doubtful attributes of polemical tendencies.

After Bichat there are three French names connected with the history of medical sciences in all countries. Laennec's revolution of diagnosis by percussion and auscultation, is not any the less important and precious because Auenbrugger had worked in the same field more than half a century previously, to no other purpose than complete oblivion. Magendie's experimental physiology and pharmacology have benefited all mankind. His is the introduction of alkaloids, such as quinine, veratrine, strychnine, piperine, morphine, emetine—his, the successful admission of bromine and

iodine into practical therapeutics. Finally Broussais, by overthrowing ontologies—though he created one of his own—by localizing disease, by urging prevention and abortive treatment, by studying the anatomical lesions of pathological processes, has substituted a method of anatomical thought in diagnosis for the merely clinical and empirical observation of the sick, and thus been the intellectual author of that method of medical knowledge and reasoning which is best known by the name of the Vienna school. I shall have to consider its representatives shortly, with all its virtues and faults, both of which were learned and loaned from the illustrious Frenchman. For not only did he convey to them his anatomical way of thinking, but he also taught them to be satisfied with coarse local anatomical lesions, and with a nominal diagnosis, adding the assurance that those lesions must lead to death; that indeed the case is either getting well spontaneously, or absolutely hopeless, and that a treatment of any kind is powerless.

The parallelism of political and scientific conditions which strikes us so admirably in the history of French development after the impulse given by the Revolution, is sadly illustrated by poor Germany. The country poor and forlorn, divided in hundreds of shreds, large and small, tyrannized and robbed by hundreds of dukes and bishops, and princelings of all sorts, every one the inferior in mind, but the emulating admirer of the tendencies of that despotic Frederick the Second, of Prussia, in whom it requires the equally despotic soul of a Carlyle to find nothing but admirable traits; that country had, about the end of the eighteenth century, one representative in medicine corresponding with the character of the time. Hufeland was a fair observer, a copious writer, an influential man, but weak and accessible to everybody and everything. It was he who admitted the first Hahnemannian gospels to his journal, and who was of the wise opinion that there may be something good in everything. Then came the French, and whipped the Germans out of political existence. Then the wars which expelled the French, bloody, costly, and short, aroused a peculiar romantic fanaticism which pervaded the whole literature of a short decade, and could but have an unfavorable influence on science. Then came decennia of brutal political reaction and suppression, the scanty means of the nation being spent on police, military, and dungeons, in which the flower of the country, and particularly of the universities, was incarcerated. During that time German thought had no place in terrestrial parts; even before that time Schiller had proclaimed man "free though he wore chains." This sort of freedom the Germans utilized to become transcendentalists. The principal method of studying nature was imagination. Even Kant, the mathematical thinker, had taught them the art of construing things a priori. Then came Schelling with his system of natural philosophy, and Hegel who wrote twenty big volumes, and is reported to have said on his death-bed, that in all his life he had but one pupil who understood him, and that one did not know anything about him. Under the influence of these philosophical absurdities no medical science could thrive. This was the time of animal magnetism and granioscopical humbug.

In such a condition of universal intellectual semi-

paralysis and revelry in big words and clouded sensations of all kinds, combined with the insensate and murderous character of therapeutics, it was natural that homœopathy could thrive, with its axioms, that disease was an enemy from without, the result of psora or of medicines; that nature was an enemy of man; that nature will not cure a disease, but a medicine will; that no medicine which can be shown by any physical or chemical analysis still to exist will cure; that its dynamical power increases with its attenuation and annihilation. That was the time in which one of the great lights of German medicine defined inflammation as the condition in which the "electrical essence (or part) is affected in the dimensions." Marcus never said that he understood that himself. At that time the medical literature of Germany was full of such philosophizing nonsense; full of contempt of the unphilosophical foreign countries; of Bright, with his British coarseness in studying nature as it was; of Laennec, whose percussion and auscultation were declared to be immoral and irreligious. My beloved teacher, Prof. Fred Nasse, though all his life a believer in and author on animal magnetism, was one of the first to utilize Laennec's great innovation and the lessons of foreign teaching. Even Schoenlein, though it was through his influence young Virchow, after he had been expelled from Berlin for his liberal political views, was called to Würzburg to teach pathological anatomy, could not free himself from the influence of philosophical doctrines. At that time the science of therapeutics consisted indeed in nothing but empty words, its practice to a great part in the traditional blood-letting, salivation, and purging. Thus it was that the fanatical hydropathists, and the adversaries of vaccination, could obtain such rare opportunities and successes. Thus, that but forty years ago, Rademacher could divide all ailments into saltpetre, copper, and iron diseases, by reason of the remedies of which each cured one-third of all the ailments of German kind.

Schoenlein and Liebig having prepared the medical minds, and the influence of foreign literatures being gradually felt in Germany and Austria, it so happened that Vienna had in its faculty of medicine quite an array of medical genius. Rokitansky, Skoda, Hebra, have long reigned supreme. Broussais's doctrines, good and bad, were readily accepted; his ontological gastroenteritis was replaced by Rokitansky's doctrine of the crases of the blood, thus reestablishing the old humoral theory on an apparently firmer foundation. In Rokitansky's opinion, the anatomical changes were the only thing in medicine worth knowing. Skoda, for some time, experimented carelessly and unsuccessfully with remedies; his ill-success and Rokitansky's teaching, confirmed the nihilism of Broussais against which Laennec protested in France, and made the expectative treatment, and the nihilistic faith, the gospel of German practice.

"This was the medicine—the patient's woes soon ended,
And none demanded: Who got well?
Thus we, our hellish boluses compounding,
Among these vales and hills surrounding,
Worse than the pestilence have passed.
Thousands were done to death from poison of my giving;
And I must hear by all the living
The shameless murderers praised at last."

But in Goethe's "Faust" this is said by an incorrigible philosophical roué, who is ready to give himself up to the devil, and in Germany it had the result that the public, who have a right to desire to be cured when they fall sick, preferred the homœopathic pill-box to the pathologist's post-mortem case.

Not long after, Oppolzer, whose name ought to be blessed forever in Prague, Leipzig, and Vienna, began his influential career. In him Germany possessed its first great physician in this century, who knew pathological anatomy perfectly, was a thorough diagnostician, a humane physician, an amiable teacher, who recognized the social, scientific, and humane duties of the practitioner, abhorred preconceived ideas and *a priori* constructions, acknowledged principles and facts only, and no duty but to find the truth.

It was about that time that Rudolf Virchow commenced to revolutionize medicine. Modern medical science owes its solid foundation and elaboration to him and his followers. The book of medicine of to-day, and, I trust, of the future, bears the imprint of his genius on every page. We all have read, and admired, and praised, knowing that when we readily place Germany in the first rank of the medical world to-day, the name of Virchow is in every mind, on every lip. This brief sketch cannot do him justice, nor do I desire to elaborate a theme with which every one is familiar. But one remark I cannot suppress, viz.: that he is not only great in his revolutionary discoveries and innovations, but in his self-denying conservatism also. If the bacteriomania of modern time has not been accepted uniformly as the universal gospel of modern pathology, if thoughtful hesitation and healthy criticism are still heard above the noisy waves of the seas of all-explaining and all-saving theories which claim to have given, at last, an absolutely solid base to etiology and pathology, that merit again belongs to a great extent to Virchow. I speak of it here because I hope that this Academy may be able to contribute to the solution of questions of great import, by original studies and discoveries.

For there was lately a time, or rather we still live in that time, when a single series of discoveries lays claim to having changed the aspect of pathology at one stroke, and solved all problems. You know I speak of bacteriology. In America also, all of those who cannot judge of the question by their own investigations—that is, the practitioners, either general or special, have readily accepted the new gospel with but few exceptions. The new theories that infectious and zymotic diseases have each their own bacillus, are so pleasant, and promised to be so fruitful, that it required some courage critically to resist the flood. On the other hand, those amongst us who have a right by their own researches and special knowledge to be heard, have hesitated to accept the results of microscopical, actual or alleged, discoveries as the sole explanation of everything infectious and zymotic. Amongst them I shall only name Wood and Formad, and Sternberg. Into the merits of the case, and the weighing of reasons I cannot go this evening, but it has appeared to me that it would be well to direct the attention of the Academy to that subject as one greatly deserving of its attention.

To me, while I readily acknowledge a valuable in-

crease of pathological knowledge, and the fact that the spreading of some disease at least, slow, and gradual, and regular, seems to prove the multiplication of cases of disease by the regular multiplying of its causes, it has always appeared that purely bacteric etiology has too often begged the question, and that the answer to the question, whether organic or chemical poisons are the main causes of infectious diseases, has, by no means, been satisfactorily given. In the course of the last dozen years, organic chemistry has made as rapid strides as has microscopy. Cadaveric poisons, ptomaines, have been discovered in great numbers. Most of them are very destructive. Sudden deaths of zymotic and infectious diseases resemble much those produced by these poisons. That the stings of insects, or the poison engendered in putrid corpses lead to speedy destruction has always been known. Its symptoms are exactly like those produced by many known poisons. Forensic medicine has a great many instances already, in which it could be proven that the poison extracted from the body of the dead was not a vegetable agent, introduced during life, but the cadaveric poison. Count Gibbone was said to have been murdered with delphinine. Prof. Selmi proved that what was claimed to be that vegetable poison, was cadaveric. In another case, he saved the life of a suspected person by proving that it was not morphine, but a ptomaine which was found in the body. Besides the poisons named, there are strychnine, colchicine, atropine, conine, woorara, nicotine, veratrine, hyoscyamine, narceine, the symptoms and chemical reaction of which are the same, or almost so, as the cadaveric poisons. Lecithine is found in putrid fish; a very dangerous chemical poison has been extracted from putrefying Indian corn and rye. Thus it is that many cases of poisoning with cheese, meat, fish, sausage, jelly, and yeast, many of them resembling acute infectious fevers, may find, and indeed have found, this ready explanation.

Brieger found quite a number of different varieties of cadaveric poisons—neuridine, neurine, muscarine, æthylendiamine, gadinine, and others. Many of these destroy life in a short time, and with the symptoms of acute infectious diseases. These poisons are found, in many instances, in the fresh dead body, not in that one which has undergone complete putrefaction. The results of putrefaction will, after a while, change entirely and become rather wholesome than injurious. Many years ago, Salkowski examined a vessel full of ascitic fluid, which he knew to be in utter putrefaction when he last inspected it. Not only was there no putrefaction any more, but, on the contrary, chemical decomposition had formed phenol. Thus putrefaction had worked its own destruction and antidote. The inference, then, is that a poison, even in the course of the same disease, may not always be found.¹

¹ Would it be so impossible to judge that the bacterium is an accompaniment of a chemical poison and may be present, or absent, according to the changed condition of the poison? Such changes take place all the time in putrefying material as Salkowski has shown, and others after him. They probably take place in the living body also, during infectious fevers. In the incubation they develop, they are most poisonous and vehement during the height of the process, they gradually change into less dangerous combinations, into an indifferent state, and finally a really disinfectant

Ptomaines are often met with in the presence of bacteria. Is it the latter which produce them? Do they so decompose the albumen of the tissue that a ptomaine must or can develop? Or is it their own vital change which produces it? Most modern writers—not chemists—believe it. But if the cause of decomposition of the living or dead be not bacteria, but a chemical poison after all, is it necessary to assume that the poison cannot form except through and with the presence of bacteria? And is the bacterium the only poison? or the only source of the poison?

If deadly poison, such as we know to destroy life suddenly, or almost suddenly, and of such virulence as is reported in what was formerly believed to be legendary only, but which may be historical, will almost invariably originate in the dead body, is it so impossible that it may develop in the still living under certain circumstances? Have we not had enough yet of the monthly instalments of new bacilli which are the invariably correct and positive sources of a disease, and replaced by the next man who comes along? Have we not yet enough of the statements, that, as for instance, several bacilli are claimed each to be the only cause of diphtheria, by several observers, that there may be several distinct bacilli, every one of which can produce the same scourge? Is it not just as safe still to presume, that, when several forms of bacilli are believed to be such sole causes, that the real cause is in neither?

Exactly so, neither in one nor in the other, notwithstanding it all appeared settled. For our journals are replete with the very latest authentic bacterium of diphtheria. This time it is neither Klebs nor Eberth, but Loeffler. Reports, discussions, and even editorials carry his name over the world. The very nature of diphtheria is said to be revealed again, as several times before; still, the discoverer admits that there are cases without the bacterium.

The matter is becoming ludicrous. I begin to fear something like the rebellion against piano-playing in a large European city. Is not music a godly art, and the piano a blessing to the musician? But the playing of fifty thousand beginners in a large city is a nuisance. When bacterio-microscopy in the hands of beginners becomes noisy like piano-playing—noisy in books, pamphlets, and journals—a gentle protest is permissible. That protest is not meant for the masters who know how to wait and to mature. I do not speak against Robert Koch and his peers, who all of them are more modest than their followers. When the kings build, the cartmen are kept busy—and boisterous.

A dozen years ago the coccus of whooping-cough was said to be discovered. There was no doubt about it. There was whooping-cough, there was a coccus, what was plainer and more conclusive? To cure whooping-cough, nothing is required but to kill the coccus. Quinine will kill a coccus, quinine cures whooping-cough. Since that time there is no more whooping-cough in existence; or, if a case would be malevolent enough to turn up, it could not last longer than until a few whiffs of quinine can reach it. That is ludicrous, is it not?

material. Thus it may be that the floating poison may become even beneficial. Is it for that reason that patients who have outlived a serious attack of typhoid fever, are endowed with better nutrition and more vigor afterward than they ever enjoyed before?

But it was preached like gospel, and it was believed. Many more such have turned up, and will turn up, for coming years to smile at.

There is a peculiar feature in this bacteriomania. Its principal impetus it received in Germany at a time when great changes had taken place in its political and financial affairs. All at once there was an Empire, of which historians so much spoke, youth so much dreamed, romancers so much fabulated. All at once, at the same time and a decade before, an unusual industriousness, commerce, enterprise, and unwonted wealth, and still more expectations than wealth; all at once an influx of five thousand millions of francs, not earned by honest work, but conquered by war, which could not but turn the poor heads and unstable the solid foundations of regular development. From that time dates the lack of safety and steadiness in German financial circles. They have even invented a name for that period of swindling, "gründerthum." Speculation was rife—fortunes were made in a day from nothing but self-assertion and daring, and lost as quickly.

The moral and intellectual atmosphere created by these tendencies is never breathed by one class of people only. If self-assertion can make a fortune in finance, why not in science? If a reputation may perhaps be made by a stroke of chance, why not try that chance? Speculation was rife. Any young man can look through a microscope, perhaps he will draw the prize in the lottery of alleged science. Looking would be all right, if he would not write. Medical life would be easier if there were less journal articles containing the latest infallible discoveries. Thus it has come to pass that German medicine has a twofold aspect nowadays. The days of her superiority are not over yet, her greatest men still live, and the toiling thinkers are at work, but the number of speculators is immense. A great many of the articles printed in the journals of the last ten years have been prematurely published, the number of preliminary notices announcing discoveries under way is very large. The great embryo cannot wait. He is afraid of having his celebrity snatched away from him by the next-door microscopist.

Thus it is that we often find a difficulty in keeping our eye on the great lights, whose rays are always welcome. If learned and thoughtful specialism has its justification anywhere, its field is the solution of the mooted questions alluded to. Thus far I claim, however, that in regard to bacteriology, the main questions are before the medical world still. I firmly hope the Academy will prove the centre of critical researches by which the problem, whether bacteric or chemical poison, still a mystery, will be carried nearer its solution.

In this expectation I am justified by a reference to the historical fragments you permitted me to sketch to-night. There has been no deviation from the empirical and clinical tendency of Anglo-Saxon medicine from the beginning. It was so strong that it gave character to the medicine of the eighteenth century. In the words of the Testament I might say, Sydenham begot Boerhaave, Boerhaave begot Van Swieten, Van Swieten begot John Peter Frank. Sydenham and his generation of followers are the flower of the whole century, and their spirit penetrates everywhere. In those times the senses alone were the diagnostic apparatus. The

exact methods of the following decades have sharpened the senses of the English and American medical men, and rendered their observations more accurate and their results more correct. Live and learn has been their pass-word. No new methods have ever been neglected, only unfounded theories ought not to find root in the regular medical profession. As the best features of all experience and wisdom of all ages and all nations have been utilized in the establishment of our political system, thus the American medical mind has received, appropriated, and critically digested the results of foreign scientific labor and added of its own. It is with sincere pleasure that I have again read that interesting collective volume containing a century of American medical history. In it those of you who have not read it will find many a good reason to be proud of the achievements of our country. It is so modest in its tone and contents that many more names might have appeared in the enumeration of men and labors, not to speak of those who have added materially to our wealth of intellectual productions since. Its perusal will be a revelation to many who are in the habit of looking for everything new and trustworthy, and—that is the technical term now-a-days—epoch-making, from abroad. If there is anything which teaches us both justifiable pride and desirable modesty, it is the history of our science in our whole country. For besides a great many of the former and present members of this Academy who have accomplished lasting results, there are a great many other Americans in other States and cities who stand on a level with the best of all nations.

From the reading of old journals, I learned but lately that four years before Semmelweiss proclaimed the contagious character of puerperal fever against the protest of the official standard-bearers of obstetrics in Austria and Germany, our own anatomist, our philosopher, our poet, our autocrat, our own Oliver Wendell Holmes, taught, it is true, against the ridiculing sneers of Hodge and Meigs, the frequent transmission of puerperal fever by physicians and nurses. I might go on a long time, but I do not stand here to extol America or American medicine. Still, I feel strongly that we may be well satisfied with what we, not protected by governmental interference, unaided by a slow growth through centuries, have accomplished in a proportionally short time. The last few decennia gave us the library of the Surgeon-General's office, the subject catalogue, the medical and surgical history of the war, standard books recognized as such in Europe, great journals, and a goodly array of valuable monographs, and vastly improved college education; they have raised great surgeons and clinicians of universal reputation, and a progressive profession whose aim and best efforts are directed toward the improvement of medical training, and the sanitary condition of the people.

All this I firmly believe is true. If it were not, let us make it so. If it be, let us still rise and work, and with all that, let every man among us feel what Holmes said forty years ago: "I am too much in earnest for either humility or vanity."

DR. JACOB then introduced DR. CHADWICK, of Boston, who, having presented to the Academy a copy of the latest photograph of Dr. Oliver Wendell Holmes, read an open letter from the latter to Dr. Barker on the occasion of his retirement from the Presidency of the Academy.

CORRESPONDENCE.

DRAINAGE OF CEREBRAL ABSCESS.

To the Editor of THE MEDICAL NEWS.

SIR: In the issue of THE NEWS for January 10, 1885, is an editorial, viz., "Drainage of Cerebral Abscess," to which I desire to call your attention. From some cause, I failed to notice at the time the editorial in the number for Aug. 2, 1884, to which you refer. But in the issue for January 10, 1885, you repeat the portion of it which I wish to notice, when you say, "Up to that time, August 4, 1884, only three cases of cerebral drainage had been reported." Then in this number you add Dr. Noyes's remarkable case, which appeared in the July number of the *American Journal of the Medical Sciences*, and say: "Unless we greatly mistake, 2d, Dr. Noyes led the way on this side the Atlantic in draining a cerebral abscess. 3d. But the first operation of the kind must be credited to Buchard, whose case is published in the *Deutsche Zeitschrift für Chirurgie*, Bd. xv., 1881." You give the credit, if any, to Buchard, Fluhrer, and Lee, all foreigners, and fail to mention a single American in this connection, except to credit Dr. Noyes for the first operation on this side of the Atlantic, and, as I understand it, Dr. Kemper the second. I am unable to refer to any particular case just now but my own, which was reported in the *American Medical Weekly* for May 9, 1875, but I am impressed with the idea that, in my reading, I have seen more than one case reported by American surgeons. But, let this be as it may, my case alone makes it unjust to your countryman to say that, up to August 4, 1884, there were only four cases, including Dr. Noyes and the first foreigners.

It also proves you are mistaken in giving Dr. Noyes the leadership on this side the "big pond," unless his case occurred at a much earlier than its record in the *American Journal of the Medical Sciences* would indicate—July, 1882.

3d. You are also mistaken in giving Buchard the credit, if any attaches to it, of being the first to use drainage in cerebral abscess. My case occurred on the 9th day of March, 1875, and was read by Dr. C. W. Kelly, of Louisville, before the Kentucky State Medical Society, at its meeting, on the 9th of April, in Henderson, Ky.; but not, as stated in a note by the editor, sent to him, but handed to him at the meeting, as the writer was present. Its reading called forth considerable discussion at the time as to the local lesion of the brain. However, I send you a copy of the journal in which it was published. You will find it a very similar case to that reported by Dr. Noyes. You will perceive that I advocated drainage, and secured it by position and the use of tents. I did not specify the material of which they were made, but would state here that it was of strands of "saddlers' silk," the material I have continued to use up to the present time, when obtainable; when not, I have used horsehair, and even flax thread. I prefer silk to any other material, except in long fistulous tracks, with sac walls. When these are split open down to the lining membrane, I always use long horsehair, placing as many horsehairs in together as will fill up the original fistulous track, and then bring the edges of the wound in apposition by sutures and adhesive strips, leaving several inches of the hair pro-

jecting at each end of the wound to excite and keep up suppuration and drainage at the same time; and, as the fistula fills by granulations, I draw out the hairs one by one until it has quite healed. But excuse this digression.

I do not know who may have been the first to use drainage in cerebral wounds, consequently I make no pretensions to priority. I believe Dupuytren was the first one who was bold enough to open an abscess of the brain, but whether he employed drainage or not I am unable to say, but it appears to me that *instinctively* any surgeon who had to deal with intercranial suppuration or wounds of the cranium, involving brain tissue, *would think first* of securing the most *complete* drainage, and establish it either by tubes, capillarity, position, or, if necessary, by counter-opening with the trephine, as in Dr. Noyes's case. But it seems to the writer that he might have established sufficient drainage by position, and the repeated changes of silk, renewing, as it were, the capillary drainage, aided by position, without the additional danger of trephining the orbital cavity. Of course, I did not use drainage-tubes in my case, because there was none in use at that time, and I do not suppose that I had ever heard of one, but I never use them now except in very large wounds or large pus cavities; they are too irritating, and in small cavities or wounds I prefer the coarse saddlers' silk, and would use this in draining an abscess of the brain now as I did ten years ago in the case referred to, and which you will find, on reading, somewhat identical with Dr. Noyes's, and similar in its history. Owing to recovery, which, in the discussion before the Society I attributed *solely* to drainage, the case is very remarkable, and as it has been a long time since it was reported, I hope you may see proper to republish an abstract of it, whether it be considered legitimately as a case of cerebral wound-drainage or not.

In the March number of the *Richmond and Louisville Journal*, 1874, a remarkable case of "compound comminuted fracture of the cranium is reported by the writer, in which the accident occurred on the 1st of September, 1873. Though extremely grave, yet the unique and novel manner in which the wound was inflicted added to its interest, which was with the point of the horn of an infuriated cow, in a boy of six years. The point of her horn entered the inner canthus of the left eye, penetrating the roof of the orbit, passing upwards beneath the left half (near median line) of the os frontis, making its exit about the suture of the left parietal and frontal bones, just in edge of scalp (patient having a high forehead), fracturing the frontal bone from the inner angle of the orbicular arch to the frontal border, or, in other words, from entrance to exit of horn, tearing skin off forehead and a portion of scalp, and fracturing the frontal bone to within a half inch of the external angle of the orbital arch, throwing the whole back as a door on its hinges, the skin of the temple forming the hinge. The horn ploughed, as it were, a furrow in the anterior lobe of the brain.

"The fracture made near the median line was irregular, leaving midway between the point of entrance and exit, a triangular point of bone, the base of the triangle attached to the right half of the frontal bone. The upper left eyelid was detached beneath the brow at its

inner orbital angle and its nasal attachment, for two-thirds of its width outwards.

"The broken bones, four in number, were dissected carefully from the skin and periosteum, the loosed brains removed, and the skin and nearly all the periosteum replaced, apposition being secured by twenty interrupted sutures. A point at the internal angle of the orbital cavity was left open for drainage, which proved sufficient, as the discharge was not very great at any time."

No dressing but cold water. Patient recovered, and is at this writing an intelligent and very robust youth of about seventeen years of age, and has as solid and complete an osseous frontal bone as before the pieces were removed. Though I scarcely mentioned drainage in the report of this case, yet it was a predominating idea with me at that distant period, when I had heard nothing specially said about draining wounds of any description. Then I used a small bundle of flax threads twisted into the drainage opening left for this purpose where the horn entered the roof of the orbital cavity. But as drainage is not dwelt upon, or directly mentioned in this case, I claim nothing for it on this point, and only mention it as a remarkable recovery from extensive injury to the brain, and especially for the unique manner of its occurrence.

In a more recent case of compound fracture of the skull, July, 1880 (never published), in a negro child aged 4 years, produced by the kick of a horse, fracturing the left parietal and posterior border of frontal bone, the skull was crushed in, producing a star fracture, with the points of the star reversed, or terminating in the centre of the fracture.

I found the child comatose, with cold extremities, and pulse almost imperceptible. With a common gimlet, I carefully made a hole in the centre and most depressed point of the fracture, where the points of the star or triangles met, and by cautiously and slowly using it as a lever, I succeeded in raising one of the points sufficiently to enable me to introduce an elevator, and after much manipulation, breaking one of the triangle points in my efforts, I succeeded in raising the three depressed points nearly to a level with the sound bone. The following device was improvised for draining any blood or accumulated fluid, notwithstanding an unfavorable prognosis was given—the case was pronounced hopeless.

A large goose-quill was procured, and both ends cut off; this was threaded loosely with threads of "saddlers'" silk, about six inches in length. One inch of the silk projected from the end of the quill that was intended to enter the opening in the skull made by breaking off one of the angular points, and three inches of silk beyond the external end of the quill. This "rig" was placed in the wound, and the mother directed to keep the child on his left side. Hot applications were made to the extremities, and only cold water dressings used to the head.

In ten or twelve hours, reaction was established; pulse 130 and full, but no signs of returning consciousness up to the fourth day, when he seemed to recognize his mother by following her movements with his eyes. Pulse 105. On the fifth day there was very little, if any, fever, and the patient appeared rational, eating with seeming appetite the milk and bread with which his

mother fed him, spoonful at a time. At first there was only bloody serum discharged from the wound; but on the fourth day this was mixed with pus.

It was impossible to impress the mother with the importance of keeping the wound downward. On every visit, I found the child either on his back or right side. She said she "was afraid of hurting the sore."

On the seventh day I found him again in profound stupor, from which it was impossible to arouse him. The quill-tent had been removed by the mother, "because it was hard to keep in place, and she knew it hurt him." The first objection was true; it was hard to keep in place, but this I have since remedied. On gently probing the wound, I felt projecting into the hole in the skull a *tense* membrane; introducing the tip of my little finger, it felt like the dura mater with pus beneath it. I punctured this membrane with the point of a thumb-lancet, and pure, healthy pus welled out freely; after some hours he could be aroused for a few moments at a time.

On the next day he again appeared rational, and would eat when food was placed to his mouth. He complained of pain when moved; but at no time did he articulate a distinct word. This apparent improvement continued up to about 9 o'clock A. M. on the tenth day from the accident, when he was suddenly seized with a terrible convulsion, and died before it entirely subsided.

It is just possible that this case might have recovered if he had had an intelligent nurse, and but for the extreme ignorance of his mother—his only nurse—with complete and constant drainage of the wound, even after the opening of the abscess, may have saved the child's life.

Since I have frequently used this—sort of compound of tube and capillary drainage—I have corrected its disposition to slip out of the wound, by cutting from the end of a rubber tube, about one-eighth of an inch long, two pieces for each quill; they must be, of course, small enough in calibre to fit tightly on the quill. I force the quill first through the piece of tubing intended for the end that enters the wound, graduating the distance from the end of the quill in proportion to the depth of the wound; secondly, cut a hole a little smaller than the quill through a strip of rubber adhesive plaster, cut in proportion to the surrounding sound parts, then run the external end of the quill through this strip of plaster, placing it up to the rubber shoulder previously placed on the quill; then the other piece of tubing is placed on the quill against the plaster, but external to it; lastly, the ends of the plaster are attached to the skin on each side of the wound. If the wound is large, any number of these quills, filled with silk, or without, may be placed in the wound, in fact, one or more between the sutures if required or desired.

I have had no experience with bone drainage-tubes, but prefer the quills, when long enough, to the rubber. They soften somewhat after immersion in the secretions, but seldom enough to diminish their calibre. Should this happen, a new one is easily made to take its place. In my hands this little "rig" has seemed less irritating and more easily managed, and well adapted to small wounds and ordinary abscesses, and cannot slip in and out of the wound.

J. P. THOMAS, M.D.

ELMO, KY., January 25, 1885.

THE USE OF THE BROMIDE OF SODIUM IN SEA-SICKNESS AND IN THE NAUSEA OF PREGNANCY.

To the Editor of THE MEDICAL NEWS.

SIR: In a late number (January 17, 1885, p. 78) of THE MEDICAL NEWS, Dr. Reichert reports the result of his experience in the use of the bromides in a few cases of sea-sickness, saying, in conclusion, that in one bad case the bromide of sodium was effectual in large doses. My own experience in the use of this drug for sea-sickness differs somewhat from that of Dr. Reichert, in that I have found that small doses of the salt, administered for a week before embarkation, and continued throughout the voyage, have acted most satisfactorily in the few cases in which I have had occasion to use it.

The employment of bromide of sodium as preventive of sea-sickness was first suggested to me by Dr. Robert P. Harris, in 1883, in the case of three members of my family who were about to voyage to England; all were susceptible to sea-sickness, and one of them especially suffered from the motion even of the ordinary river ferry boats. About a week before they sailed, I began the administration of the salt in ten-grain doses, thrice daily, which was reduced to twenty grains daily after the steamer had left New York harbor. There was but little rough weather, and no one of them suffered any sensation at all approaching sea-sickness.

The prescription was renewed in Liverpool, and about a week before the sailing of the return steamer, one member of the party began taking the bromide as before; the others, relying upon their former immunity, neglected it, the result being that, although the ocean journey was not a whit more stormy than the former voyage had been, the one who was faithful to the salt was the only one who escaped sea-sickness. Since that time I have used the salt in exactly the same way on eleven persons who were about to take sea-voyages, and with perfectly satisfactory results in ten. In one the failure was due, I think, to the fact that the subject discontinued the use of the bromide because of the eruption of acne which it produced.

I do not believe that large doses of the salt are at all necessary as preventive of sea-sickness. I have frequently prevented motion-sickness in myself by taking one large dose (5j) of the bromide of sodium; but I have also found that three smaller doses (say, gr. x), taken at intervals of four hours before I tried to induce the sickness, were quite as effectual as the larger amount, and I think that it is the gentle continuous action of the bromide which is effectual in preventing sea-sickness, not the tremendous sedative effect of large doses. One of my patients was a lady who, some years before, had travelled to Europe, when the duration of the voyage was nearly twice as long as it is now. She was at that time violently sea-sick, both going and coming, and almost every vaunted remedy was tried without avail. The bromide of sodium was quite sufficient in gr. x doses to give her immunity during her second voyage.

I do not doubt that the salt will prove a disappointment in many cases when it comes to be more generally used. That it was successful in all of the cases in which I had an opportunity to note its effect, I regard as simply a coincidence.

Dr. Albert H. Smith, of this city, was in the habit of

advising his classes at the Lying-in Charity to employ the bromides in the nausea and vomiting of pregnancy, his experience being that the salt invariably modified the severity of that most troublesome and annoying complication, and in many cases removed it altogether. He was accustomed to give the bromide of sodium in large doses (gr. xxx three times a day), and I have found that, in my hands at least, a smaller one has always failed of the desired effect. I have used the salt in twenty-one cases of pregnancy when nausea was present; in sixteen cases the symptom disappeared entirely while the drug was being used; in two cases it persisted, but in a less degree; and in three cases the salt had absolutely no effect whatsoever.

ROBERT PATTERSON ROBINS, M.D.,
Assistant Demonstrator of Clinical Medicine in the
University of Pennsylvania.

2226 LOCUST STREET, PHILADELPHIA.

NEWS ITEMS.

MONTREAL.

(From our Special Correspondent.)

SINGLE KIDNEY.—At the Montreal General Hospital, a single kidney was discovered in a patient who had died from the effects of an injury to the spine. The kidney was of ordinary size, and situated in the normal position of the right kidney. On the left side, no kidney could be found, its place being occupied by a mass of fat; there was only one ureter entering the bladder—that for the right kidney.

NEW SENATOR.—Dr. Sullivan, of Kingston, Ont., who was last year President of the Canada Medical Association, has been appointed by the Government to be sent to the Dominion Senate. Dr. Sullivan is an eloquent speaker, and has been a zealous politician for a number of years. His knowledge of sanitary and medico-legal matters will be of great value in the Upper House.

JEFFERSON MEDICAL COLLEGE.—It is stated that Prof. Mallet intends, at the close of the session of this year, to resign the Chair of Chemistry to which he was elected last autumn, and that he will resume his professorship at the University of Virginia. Prof. Mallet has proved a very acceptable teacher to the medical class at Jefferson, and his intended resignation is greatly regretted.

PROF. OSLER has been granted leave of absence by the Trustees of the University of Pennsylvania, and he sailed last Wednesday for England, where he will deliver, in the month of March, the Gulstonian Lectures before the Royal College of Physicians of London.

ACADEMY OF MEDICINE IN IRELAND.—At a special general meeting of the Academy of Medicine in Ireland, held January 17th, on motion of the General Council, Dr. Austin Flint, Sir James Paget, Prof. Billroth, Prof. Virchow, Prof. Pasteur, Prof. Charcot, Dr. Keith, Prof. Schröder, Prof. Kölliker, and Sir Joseph Lister were elected honorary members.

ERRATUM.

In the report of the proceedings of the New York State Medical Society, on forty-fourth line of page 156 of our last issue, for "Dr. Mundé," read "Dr. W. Gill Wylie."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 3 TO FEBRUARY 9, 1885.

TOWN, F. L., *Major and Surgeon*.—Granted leave of absence for twenty days.—S. O. 14, *Department of Texas*, Feb. 4, 1885.

WATERS, WM. E., *Major and Surgeon*.—Granted leave of absence for one month.—S. O. 24, *Department of the East*, Jan. 31, 1885.

WILSON, WM. J., *Captain and Assistant Surgeon*.—Ordered for duty as Post Surgeon, Fort Preble, Me.—S. O. 27, *Department of the East*, Feb. 5, 1885.

WOODRUFF, EZRA, *Captain and Assistant Surgeon*.—Ordered from Willet's Point, New York Harbor, to Department of Dakota.

TAYLOR, MARCUS E., *Captain and Assistant Surgeon*.—Ordered to Department of the Missouri.—S. O. 30, A. G. O., Feb. 5, 1885.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FROM JANUARY 1 TO FEBRUARY 7, 1885.

STONER, G. W., *Surgeon*.—When relieved to proceed to Washington, D. C., for duty, as Chief of Purveying Division, Jan. 16, 1885.

BENSON, J. A., *Passed Assistant Surgeon*.—When relieved, to proceed to Chicago, Ill., for duty, Jan. 12, 1885.

CARMICHAEL, D. A., *Passed Assistant Surgeon*.—When relieved, to proceed to Cairo, Ill., for duty, Jan. 3, 1885.

AMES, R. P. M., *Passed Assistant Surgeon*.—When relieved, to proceed to New York, N. Y., for duty, Jan. 14, 1885.

URQUHART, F. M., *Passed Assistant Surgeon*.—To proceed to Norfolk, Va., and assume charge, Jan. 12, 1885.

BROOKS, S. D., *Assistant Surgeon*.—To proceed to Evansville, Ind., and assume charge, Jan. 14, 1885.

CARRINGTON, P. M., *Assistant Surgeon*.—To report to Surgeon-in-charge, St. Louis, Mo., for temporary duty, Jan. 17, 1885.

LONG, W. H., *Surgeon*.—Relieved at Detroit, Mich., to proceed to Chicago, Ill., and assume charge, Feb. 4, 1885.

GODFREY, JOHN, *Passed Assistant Surgeon*.—To proceed to Vicksburg, Miss., and Memphis, Tenn., as inspector, Feb. 6, 1885.

BENNETT, P. H., *Assistant Surgeon*.—To assume temporary charge of the Service at Detroit, Mich., Feb. 4, 1885.

WILLIAMS, L. L., *Assistant Surgeon*.—To report to the officer in charge at Detroit, Mich., for temporary duty, Feb. 7, 1885.

RESIGNATION.

MILLER, T. W., *Surgeon*.—Resignation accepted by the Secretary of the Treasury, to take effect March 1, 1885, Feb. 4, 1885.

PROMOTIONS.

STONER, G. W., *Surgeon*.—Promoted and appointed Surgeon by the Secretary of the Treasury, from January 16, 1885, Jan. 14, 1885.

GODFREY, JOHN, *Passed Assistant Surgeon*.—Promoted and appointed Surgeon by the Secretary of the Treasury, from March 1, 1885, Feb. 6, 1885.

APPOINTMENTS.

CARRINGTON, PAUL M., M.D., of Georgia, having passed the examination required by the Regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, Jan. 16, 1885.

WILLIAMS, L. L., M.D., of South Carolina, having passed the examination required by the Regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, Feb. 6, 1885.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.